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OCT 31 1946

# AMERICAN NURSERYMAN

*The Nurseryman's Forte: To Make America More Beautiful and Fruitful*

NOVEMBER 1, 1946



*Fagus Sylvatica Pendula*

**SEEDS**

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FLOWER—VEGETABLE

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	Per 10	Per 100	Per 1000
11/16 to 7/8-in., 4 1/2 feet and up...	\$6.50	\$60.00	\$550.00
9/16 to 11/16-in., 4 feet and up...	5.50	50.00	450.00
7/16 to 9/16-in., 3 feet and up...	4.00	35.00	320.00
5/16 to 7/16-in., 2 feet and up...	2.90	25.00	220.00
7/8-in. and up, 5 feet and up...	7.50	70.00	.....

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Beacon  
Ben Davis  
Black Ben Davis  
Delicious  
Delicious, Dark Red  
Delicious, Yellow  
Duchess  
Duchess, Red  
Florence Crab  
Grimes Golden  
Joan  
Jonathan  
Jonathan, Dark Red  
Maiden Blush

Malinda  
Northern Spy  
Northern Spy, Red  
N. W. Greening  
Red Siberian Crab  
Rhoda  
Stayman, Red  
Stayman Winesap  
Turley  
Virginia Crab  
Wealthy  
Whitney Crab  
Winesap  
Winesap, Crimson  
Yellow Transparent  
York Imperial

## APPLE and CRAB

	Per 10	Per 100
11/16 to 7/8-in., 4 1/2 feet and up...	\$6.50	\$60.00
9/16 to 11/16-in., 4 feet and up...	5.50	50.00
7/16 to 9/16-in., 3 feet and up...	4.00	35.00
5/16 to 7/16-in., 2 feet and up...	2.90	25.00
7/8-in. and up, 5 feet and up...	7.50	70.00

Baldwin  
C. E. White  
Cortland  
Dolgo Crab  
Early Harvest  
Early Strawberry  
Fameuse  
Fireside (Minn. No. 993)  
Gravenstein Red  
Haralson  
Hibernal  
Hyslop Crab  
Lodi  
Kendall  
Macoun  
McIntosh  
McIntosh, Black Mickey  
McIntosh, Early  
Melba

Milton  
Minjon (Minn. No. 700)  
Minn. No. 638  
Minn. No. 714  
Minn. No. 790  
Minn. No. 240  
Patten Greening  
Prairie Spy (Minn. No. 1007)  
Red Astrachan  
Red June  
R. I. Greening  
Rome Beauty, Red  
Salome  
Secor  
Sharon  
Tolman Sweet  
Victory (Minn. No. 396)  
Willow Twig, Red  
York Imperial, Red

## PEAR — Standard

	Per 10	Per 100	Per 1000
11/16-in. and up, 4 1/2 feet and up	\$11.00	\$100.00	.....
9/16 to 11/16-in., 4 feet and up	9.00	85.00	\$800.00
7/16 to 9/16-in., 3 feet and up	8.00	75.00	700.00
5/16 to 7/16-in., 2 feet and up	6.00	55.00	500.00

Bantam	Douglas	Lincoln
Bartlett	Duchess	Mendel
Beurre d'Anjou	Flamish Beauty	Parker
Beurre Bosc	Garber	Patten
Clapp Favorite	Kieffer	Seckel

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1/4-inch and up, straight, heavy	3.20	28.00
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No. 1, 3/16-inch and up, straight, strong	2.90	25.00
Special or Stub Grade, 3/16-inch and up, strong	2.10	18.00
No. 2, 2/16 to 3/16-inch, branched, strong	2.10	18.00
No. 2, 2/16 to 3/16-inch, straight, strong	2.10	18.00
No. 3, about 2/16-inch	1.40	12.00

## PEAR SEEDLINGS—

### Washington-Grown Bartlett

1/4-inch and up, branched, heavy	3.70	32.00
No. 1, 3/16 to 1/4-inch, branched	3.20	28.00
No. 2, 2/16 to 3/16-inch, branched	2.40	20.00
No. 3, about 2/16-inch	1.70	14.00



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# AMERICAN NURSERYMAN

[Registered U. S. Patent Office]

*The Nurseryman's Forte: To Make America More Beautiful and Fruitful*

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**CLOSING DATE**—Present printing conditions require that more time be given for putting current issues of the American Nurseryman through the press. So if you send material for either the advertising or the news columns of the **November 15** issue, please mail in time to reach this office by **November 5**.



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## AMERICAN NURSERYMAN

F. R. KILNER, Editor

### Editorial

#### PLANTS IN SHADE.

Nurserymen's retail catalogs, like books on gardening, are likely to contain lists of plants for various purposes, and one of these is usually a list of plants for shady places. Such a list, without qualifications or additional information, is likely to be vague in meaning, if not misleading. With the vast increase in gardeners among city dwellers, who face the problem of shade from neighboring buildings, and suburban residents, who may be handicapped with heavy tree shade, there is need for more accurate information on plants in shade.

Most of the lists, one would hazard a guess, just name plants which can be planted in a shady location and survive. While that prevents the amateur from suffering the loss of plants quickly, that information is scarcely adequate.

If the amateur whose garden is much in the shade is to be encouraged, he should be advised as to what plants will actually thrive—not just exist—in that location. Plants from the woodland are in this category, though some of them have other requirements than shade. Some shrubs and evergreens will thrive in shade and some perennials will flower well, though they may need to be replaced earlier than in sun. Certain plants are outstanding as favorites for shady spots, as tuberous-rooted begonias, which will do less well in full sun.

Then there are plants whose characters differ in sun and shade. The variation is most notable in the extent of flowering, as is natural. Less noted is the difference in character of growth in sun and shade by shrubs which get along under either condition. Some shrubs will run to foliage and spread in awkward fashion in shade, whereas they will grow higher and stronger in stem in sun, with more graceful foliage.

The matter of moisture is, of course, important, for most plants which are favored by shade need ample moisture as well.

Spring-flowering shrubs and perennials are likely to do satisfactorily in some shade, particularly if it is cast by trees, because they make growth and come into bloom before the leaves overhead attain the thickness of summertime growth.

Other characteristics might be

mentioned, but these few suggestions indicate how misleading it is just to present a list of plants that will grow in shade, without more accurate advice to the amateur gardener. Some city garden clubs have taken up the study of the subject in a small way. Those and others whose gardens are in similar environment might add greatly to the success of urban gardening by extending their research and assembling their observations for general benefit.

#### FARMERS CAN BUY.

Nursery firms which sell to farmers can expect ample buying power in the ranks of their customers in the next year or two, at least.

Agricultural income this year is reaching a new peak. Farmers will realize from the sale of their crops an increase of ten per cent over 1945, and net income also is expected to be about ten per cent larger than last year, according to a survey made by the bureau of agricultural economics.

Having enjoyed a succession of record income years, farmers have accumulated large sums in cash, savings accounts and government securities.

A large percentage of farmers plan to utilize their liquid savings for purchases within the near future, in additional land, farm improvements or new machinery. No doubt those in a favorable position will give consideration to replanting or adding to their orchards.

Consequently, the trade outlook in rural areas is bright because of the prospect of liberal purchasing there.

#### RESERVE ROOMS EARLY.

The meeting calendar in this issue lists the important state association meetings of early midwinter. The attendance at these meetings is likely to be large. Indeed, in most cases the attendance is expected to be of record size, because of the growth of the associations, the importance of the discussions on topics of current interest and the number of small operators away during the war who have now resumed business.

For this reason it is doubly important that hotel accommodations be reserved early, because they are still hard to get in most localities. Better look over the list of coming meetings now, decide on those which you are at all likely to attend and send in your hotel reservations at once.

## The Mirror of the Trade

#### LOOK AT THE BOOKS.

When demand for stock was strong and competition was limited in the war years, practically everybody paid his bills promptly. Even firms that were habitually slow pay in the pre-war days improved their habits, achieving a better credit rating perhaps than their longer previous history deserved.

Already some of the firms of this type have fallen back into their old habits and are letting accounts run past a reasonable period. Undoubtedly this is a reflection of an easier market and increased competition.

If your firm has a credit manager, no doubt he has noticed the change, even if it is slight as yet, and he can act accordingly. However, some organizations have little or no credit or collection organization today, on account of the shortage of help and the lack of necessity for one during the war years. The latter should watch their accounts at this time, because it is much easier to keep collections in line than it is to recover from the effects of inattention or oversight which might naturally occur in a transition period such as the present.

#### USE YOUR LETTERHEAD.

Wholesale firms report an increasing number of inquiries and requests for prices from individuals who write on plain post cards or unprinted sheets of paper. When these inquiries arrive with no indication of any connection with the trade, a busy nurseryman is inclined to consign them to the wastebasket. Others, more conscientious, may take the trouble to look up these inquiries, answering those whose names can be found in trade records.

If you expect to obtain trade prices, it is important to give evidence of your trade connection. It takes valuable time for the seller to hunt for your name among lists and directories. If you want a prompt response, write on business stationery.

In these days many new firms are embarking in business in this field. But there are always amateur gardeners seeking to secure their retail wants at wholesale prices. You want protection in your locality against that type of buyer, and your cooperation with wholesale sources of supply is one of the surest ways to obtain it.

Hence the various advantages to be gained make it well worth your while to have business stationery and to use it in all business correspondence.



# Shade Tree Fertilization

By August P. Beilmann

When we began experimental tree feeding about sixteen years ago at the Missouri Botanical Garden Arboretum, Gray Summit, Mo., one of the unexpected benefits was the continued good growth in spite of the very dry years which we experienced at that time. Shade trees which had been fed grew rapidly and continued to grow in spite of the lack of soil moisture. Another of the important advantages, pointed out at that time, is the fact that the better and often slower-growing trees could be made to grow as rapidly as the elms and sycamores, so widely used on our lawns and streets. With an outbreak of phloem necrosis and oak wilt in the middle west, and Dutch elm disease and London plane disease in the east, we must give serious consideration to diversifying our plantings. Even though we succeed in controlling or even eradicating one or even all of these troubles, we shall fail if we continue to plant only one or two species in each community. It will always be dangerous to plant so that a single disease may kill every tree within a city. If we follow a program of feeding we can grow many other species, especially those whose only disadvantage is that they grow slowly.

In our experimental tree feeding at the Missouri Botanical Garden, we worked with mature trees, permanently planted, under exactly the same conditions encountered in the field every day. We did not work exclusively with small stock planted in nursery rows, nor did we use little trees planted in pots and brought into the greenhouse—although we have a million square feet of greenhouses available for such use. The soil in the garden is a very deep loess, originally very fertile and with a great water-holding capacity. Some portions had been in lawns for virtually the whole ninety years since it was founded by Henry Shaw; in other sections great changes had been made in the grades and in the water table. As a result many of the older trees were showing signs of distress, and some were dying. Add to this a comprehensive list of species, both native and exotic, and you have a picture of just what you find on our streets and lawns.

It was generally known, mostly through the efforts of fruit growers, that a shortage of nitrogen, phosphorus or potash might limit the

growth rate and the productivity of orchards, and it was assumed that the same might apply to shade trees. It became necessary then to determine the relative importance of these three elements, and then to learn in what ratio they were needed by shade trees. At first we fed these salts singly and in various combinations; later complete fertilizers from which nitrogen, phosphorus or potash had been extracted were used. In this way each year some trees were fed complete fertilizers, while others received various amounts of incomplete formulas. It soon became evident that nitrogen was the limiting factor in nearly all cases, but an application of nitrogen alone was not so effective as a combination of nitrogen and phosphorus. While potash, when fed alone, caused no change in the tree, its presence was necessary to obtain the maximum stimulus from combinations of the other two elements. By adjusting the complete formula each year, to agree with the experimental findings of the previous year, a continual change was inevitable. At the end of five years we were feeding five times as much fertilizer, and the nitrogen in the formula had been increased two and one-half times. Where we began by using five pounds of 4-8-4, we were now applying twenty-five pounds of 10-8-6. In all cases the trunk diameter and the length of the terminal shoot increased as we increased the quantity applied, and especially in proportion to the percentage of nitrogen it contained. At the present time we are using a 10-8-6 formula, and it will not be changed until future experimental work shows the need. It would be possible to quote endless twig and trunk measurements, to chart these and to show the significant advantages of this formula over those tried previously. This would make the paper much more technical but far less understandable, and I imagine that you are interested in what we found and not how we got there.

Early in our work we discarded the practice of keeping one tree or a group of trees as a check on the performance of a similar group. We found that there was much more variation between trees seemingly alike than there was between the season to season behavior of the same tree. The value of a fertilizer was checked not between a group fertilized and

another not treated, but between the performance of a tree when fertilized and the growth rate of the preceding season when not fertilized. This required many twig measurements and many increment borings and diameter measurements to learn the effects of feeding.

The materials we used have all been quickly available; no evidence has appeared to indicate that slowly decomposing types were needed—a starving tree requires food immediately, not at some future date. In this connection it must be remembered that we were not concerned with trees making a nearly normal growth; we were attempting to determine what kind and how much fertilizer we could apply to a starving tree so that it would immediately begin to grow and flourish as though it had never known short rations. If you are dealing with normal trees, perhaps the annual addition of an organic fertilizer will insure continued good health. There is some indication that conifers prefer organic fertilizers.

From time to time objections have been raised to the use of fertilizers which were immediately available to a tree. It has been said that the effects of such fertilizers would quickly wear off and the tree would be in worse shape than it had been if not fed at all. Fourteen years ago a group of seven pin oaks, *Quercus palustris*, were fed twenty-five pounds of 10-8-6 at a time when they were in very poor shape. The annual increment was one-tenth inch; the year after feeding they added 1.35 inches to the trunk diameter. The length of the terminal shoot had increased from two inches to an average of thirty-two inches, and today they still grow eleven inches in height each year. A quickly available fertilizer is not just a "shot in the arm"; it causes more profound changes within the tree—perhaps it causes the roots to become more aggressive in foraging for food.

Of far greater importance than a fertilizer formula is the knowledge of how to use that formula. Trees are somewhat selective in the use of nutrients—they can reject whatever is not needed. We may say that they assimilate only as much nitrogen as is needed to elaborate properly the available phosphorus and potash, and only as much phosphorus and potash as is needed for the available nitro-



gen. Therefore some minor change in a fertilizer formula is far less important than the application of the correct amount of plant food. Just how much food can be given to a tree, I do not know; we have never killed a tree, although trees with a 2-inch trunk have been given twenty-five pounds of 10-8-6, about one pound of fertilizer for each pound dry weight of the plant. Black walnuts, *Juglans nigra*, when fed such quantities of food grew eleven feet in height in one season; pin oaks become weeping types, because of the long succulent shoots, three to four feet in length. If the fertilizer is applied in early spring—the best time for this work—even this very rank tender growth hardens properly and goes through the winter without damage. If small trees will accept so much food without harm, how much is required to stimulate a large old tree? By measuring several hundred trees with a transit and a steel tape, we devised a method by which a fairly accurate picture of the size of a tree could be determined, and thus the correct amount of fertilizer calculated. We have been adding the height of a tree in feet to the branch spread in feet and the circumference in inches—the sum of these three measurements is the weight of fertilizer to use. This means that you will be using several times as much fertilizer as you would if you used just one dimension. If you apply one pound per foot in height, or one pound per inch in diameter, you are not taking the size of the tree into consideration. Not

every tree fifty feet in height is equally large as every other tree of the same height, and not all trees with a 24-inch trunk are alike. The only deviation from these measurements has been in the case of forest trees—if they have a very small crown we have been using one-third of the calculated dosage. An allowance might be made for the smaller crowns sometimes found in heavily pruned street trees; otherwise a specimen tree will readily accept the full amount.

The time to apply fertilizer is in early spring; we prefer to have this work completed by June 10, although no harm will result from later applications. Some nitrogen will be lost through leaching if the tree cannot utilize it immediately, but both the phosphorus and the potash will be available a year later. There seems

[Continued on page 47.]

#### TREE-FEEDING MACHINE.

In the course of experiments aimed at diagnosing food deficiency problems in Michigan State College orchards, Dr. T. A. Merrill, formerly of the department of horticulture there and now head of that department at Washington State College, invented a machine which gives fruit trees intravenous injections of dissolved fertilizer. The device, which forces food into the trees under pressure and speeds up the resulting effects, consists of an air pressure tank and four injection needles connected to the tank by rubber hoses. The

needles have shapes similar to automobile spark plugs.

Dr. Merrill explains that in using the old methods of diagnosing food deficiency problems in fruit trees, fertilizer of the type in which the tree was thought to be lacking was applied on the ground, and then the researcher waited until the next year for the effects of the application to determine if the diagnosis were correct. Then it took another year to treat the entire orchard and correct the deficiency problem.

The researcher hopes to be able to detect the effects of injections with his new machine in as short a time as two or three weeks. After one tree has been treated and a diagnosis of its food deficiency problem made, the other trees in the orchard can be treated in the usual manner and should show improvement the next season, thereby saving a whole year.

To treat a tree, Dr. Merrill puts a quantity of a nutrient solution into the pressure can and then pumps up the tank to about 100 pounds' pressures. The needles, which are threaded on the outside, are then screwed into holes bored in the trunk of the tree. The pressure on the hose connections is released, and the liquid is forced into the trees through the food-carrying tissues and up into the branches.

Dr. Merrill feels the injection method of administering food to fruit trees would be too slow to be of practical commercial value. From fifteen to forty minutes are required to force a gallon of liquid into the trees. The solutions must be very dilute, because chemicals in solution affect trees to a greater degree than dry chemicals applied on or in the ground.

According to Dr. Merrill, a tree can stand only thirty grams of ammonium nitrate injected into it, while a normal ground application is about three pounds per tree. Dick Frazier.

#### BARINGER RESIGNS POST.

John W. Baringer has resigned as director of research of the American Association of Nurserymen as of October 1 to accept a position with the Charles F. Irish Co., tree surgeons and landscape contractors, Cleveland, O. Mr. Baringer went to the A. A. N. from his position as director of plant industry of the Ohio state department of agriculture, January 1, 1946.

During his short stay with the A. A. N., Mr. Baringer was responsible for the revision of the 1946 issue of the state quarantine chart and did considerable statistical analysis and library research work on other A. A. N. projects.



Dr. T. A. Merrill watching operation of machine he invented to inject liquid fertilizer into fruit trees to speed up diagnosis of food deficiency problems.

# Pests of Evergreens in the Nursery

By J. J. Davis, *Purdue University*

Pests of evergreens, insect pests in particular, are many in number, although perhaps a comparatively few are of great significance. However, there is every evidence that such pests are on the increase, especially foreign insects and those infesting conifers, which are becoming more strongly entrenched in the central west.

It should be noted that pests of conifers in the nursery and those attacking plantings are not necessarily equally important, although infestations in plantings usually originate in the nursery. It has always been my contention that prevention—that is, the adoption of practices to make conditions unfavorable to insects and prevent them from becoming destructively abundant—is the trend we should look forward to in future controls, whether in farm crops, orchards, vegetable gardens, greenhouses or nurseries. In other words, preventive practices minimize the insect problems before they become abundant and destructive. Too often we wait until the damage has been done and then attempt, sometimes by expensive methods, to control the pests. Thus, it seems to me that the place to begin control of insects attacking trees and shrubs is in the nursery. This, of course, is the major reason for state nursery inspection.

In the consideration of preventive practices, it might be emphasized that unnecessary permanent plantings in the vicinity of the nursery should be avoided, since they may serve as a continual source of reinfestation for nursery stock. If permanent plantings are used to beautify the office buildings, or for sales value, special care should be taken to keep such plantings free from insect infestation.

Unfortunately, nowhere in the United States has there been in recent years extensive research in insect control in nurseries. This is a field which has been much neglected, and perhaps the nurserymen themselves are to blame for this situation. State and federal appropriations are the results of demands from interested parties. There are so many demands for research that the industries making the most insistent demands and showing the greatest needs for assistance are the ones receiving the funds which are available. Thus the corn growers' association, the dairy

association, the poultry association, the horticultural association and others are getting public funds for research, because they have organized to insist on such support. The nurserymen, and to a lesser extent the floriculturists, have not made the demands, and consequently funds have not been provided for research, regardless of its importance. Therefore, I again say that the nurserymen are to blame for failure to secure greater research to solve their pest problems.

My idea of a research program to assist the nurserymen is threefold, as follows:

1. The state should have a small, isolated experimental nursery where we could develop insect infestations and where we could test out the many new organic insecticides to determine not only the effects on the insects but on the plants as well.

2. With the knowledge thus gained, we should carry these results to the commercial nursery for trial.

3. In order to develop preventive practices, an ecological survey should be made in various nurseries of the state, which would provide information regarding practices which will tend to prevent insect troubles. In other words, the survey would be a method of determining why insect troubles develop under one set of conditions and not under another. In all probability it will show that the best nursery practices are those which will minimize insect problems. This has proved true in the orchard, the greenhouse, the vegetable garden and elsewhere, and we believe it will be true in the nursery.

During recent years dozens of new materials, mostly organic chemicals, have been found useful against insect pests, and many of these are being exploited as insecticides. Perhaps the majority have merit, but we know practically nothing of their value for the control of nursery pests. Doubtless some of these will be found useful, and perhaps extremely valuable, in the nursery, but no one dares to make recommendations for their use to the nurseryman because too little is known about them. Here again, a research program is necessary to provide the information needed by nurserymen about these new materials before they can be recommended or adopted.

In considering the insects and other invertebrate pests of the nursery,

perhaps it would be well to group them according to characteristics upon which we base chemical controls, for those are the control which we must primarily consider at the present. Thus, we recognize the chewing insects on the one hand and sucking insects and mites on the other. In addition, those pests which work underground must be considered as a separate problem, and also those which live in the wood or just beneath the bark. These latter, the wood borers, are apparently not significant in the nursery, even though they are major problems in ornamental and shade tree plantings, and therefore will not be considered here.

## Chewing Insects.

Among the chewing insects which are of increasing significance are the bagworms, sawfly larvae, tip moths, webworms and pine-leaf miners. Space will permit only brief reference to and significant statements about each.

Perhaps the most common pest of conifers, as well as deciduous trees, is the bagworm, familiar to every nurseryman in the southern two-thirds of Indiana and farther south. It winters over in the egg stage within the bags and hatches and begins feeding in the latter half of June. It is easy to control by spraying with arsenate of lead, three pounds to 100 gallons of water, provided the treatment is made before the worms are half-grown. Thereafter increasing dosages are necessary. Incidentally, our own experience, and that of others who have reported, indicates that DDT is not a control for bagworms.

The greenish or yellowish sawfly larvae are common pests of evergreens, especially the pines. They may appear suddenly and cause considerable defoliation before noticed. They are called sawflies because the females have a sawlike egg-laying organ which permits them to insert eggs in the tissues of the leaves. Like the bagworm, they are easily controlled with arsenate of lead sprays if treatment is promptly applied at the first signs of infestation.

There are several tip moths, but perhaps the most significant one is the European pine-shoot moth. It is an insect of comparatively recent introduction in Indiana. Injury is most noticeable in the spring, when the larvae attack the new growth, destroying the shoots. No very satisfac-

tory controls have been developed. Clipping and burning the infested shoots before the insect becomes active in the spring have been suggested. Sprays of nicotine have also been suggested, but apparently do not offer much relief.

The pine-leaf miner, the larva of a tiny moth, mines the needles, causing their browning and death. Although we have had a number of reports of this insect the past few years, as yet it is not a serious problem, and no definite control has been developed. However, since the insect passes the winter as a larva in the needles, control by spraying with a three per cent oil before new growth starts probably will be effective.

The juniper webworm is the larva of a rather handsome small moth, with forewings of a rich dark brown color, margined with pure white. The larvae produce webbed terminal shoots of noticeable size, within which they feed gregariously. According to reports received, this is a comparatively new pest in Indiana, but there is every indication that it is becoming increasingly important. This insect passes the winter in the arval stage and pupates to emerge as an adult moth in June or July, when it lays eggs for the next brood of larvae. There is apparently only one generation a year. For control it is recommended that arsenate of lead, six pounds to 100 gallons of water, preferably with a sticker, be applied in July.

#### Sucking Insects and Mites.

Perhaps the major sucking insect and mite pests of the nurserymen in the central west are red spider, European elm scale, pine-leaf scale and pine bark aphid. All of these, and

several others, are rather universal, and nurserymen recognize the necessity of keeping them in rather complete control to insure salable and desirable stock.

Red spider is perhaps the most common pest in the nursery, and although it is especially pernicious to conifers, it is also common and destructive to deciduous trees and shrubs. We have seen evergreens so heavily infested that they presented a silvery sheen as a result of the silken webs spun by the spiders. Frequently forceful streams of water may successfully dislodge the mites and their webs, especially in landscape plantings, but in the nursery perhaps the best control is the use of wettable sulphur or a summer spray oil.

European elm scale is unusually abundant in nurseries as well as landscape plantings. Where trees are well established it does not seem to do appreciable harm, yet it must retard the growth of the trees, weakening them to the extent that they become susceptible to borers. Likewise, in nursery plantings it doubtless is a factor in hindering growth. In the past a strong (eight per cent) oil spray applied during the dormant season has been recommended, but even this has not been altogether satisfactory. Recent studies carried on in cooperation with the Indiana state entomologist's office give promise of excellent control by the use of one-half to one per cent DDT, applied during July after most of the young scales have migrated to the leaves.

Pine-leaf scale, familiar to every nurseryman, is one of the commonest pests of pine. It whitens the leaves of pines and some spruces and is a major pest in nurseries and landscape plantings. This scale insect passes

the winter in the egg stage beneath the mature scale covering, making it especially difficult to kill with dormant sprays. Timeliness of spray applications is perhaps the most vital factor in control. Nicotine sulphate, one and one-half pints to 100 gallons of water, in which six to eight pounds of soap have been dissolved, applied early in June, with a second application two weeks later, has

[Continued on page 44.]

#### CALIFORNIA SALESYARD.

Illustrated on this page is the sales and display grounds area of the recently opened Belmont branch of the Christensen Nursery Co., located at San Francisco, Cal., for many years. The building and nursery layout were designed by Thomas D. Church, of San Francisco, who was one of the winners of awards in the contest for designs of salesyards and display grounds sponsored by the National Landscape Nurserymen's Association and is a well known bay area landscape architect and home designer.

The Belmont branch, which consists of seven acres of excellent farm land on the main highway between San Francisco and San Jose, was opened in 1943. More than an acre is under lath, and four propagation houses, heated with thermostatically controlled unit heaters, are connected to a head house with space for storing seeds, supplies and equipment, making cuttings and grafts and sowing seeds. The largest building, occupying about 6,000 square feet, houses a store for retail sales, including a garden furniture display room, 32x88 feet; a packing shed, 32x48 feet, and offices, 32x64 feet.

W. B. B.



Recently Opened Belmont Branch of Christensen Nursery Designed by Noted San Francisco Architect.



# Observations on Methods of Propagation

By Fred R. Brison

Plants which the nurseryman produces are propagated largely by one of, or a combination of, three methods—from seeds, from cuttings, or by grafting or budding.

Plants are grown from seeds for sale as own-root plants, or for rootstocks. It is contemplated that when a seed is planted under conditions favorable for growth it will germinate. You who plant seeds of horticultural plants know that they do either one of two things: They do come up, or they do not. If germination is long delayed, a loss of a season's business is sustained, and that is serious. There are several causes of poor and delayed germination.

## Nonviable Seeds.

One essential part of the seed is its embryo. It produces the new plant. It is known that certain kinds of seeds do not contain an embryo when mature, and that the embryos of other kinds are likely to die before planting time. Three good illustrations can be cited.

(a) The germination of peach seeds from early-maturing varieties, for example, is usually low. Normally we do not plant pits of those early varieties. We know from experience that they do not germinate satisfactorily because a high percentage of them do not contain an embryo. Seeds of these early-maturing varieties may become mixed with good seeds and thereby result in a low percentage of germination.

(b) The embryo of the seed of at least some kinds of oak dies when the seed is allowed to become dry. If the seeds of these oaks are kept moist over winter, they normally germinate properly when planted the following spring; if the seeds are stored dry, poor germination is obtained.

(c) Certain seeds will not germinate until the rest period is broken. If they are allowed to become dry after the rest period is broken, they quickly lose their viability. This is true of apple and pear seeds. The seeds should be taken directly from moist packing material and planted directly into moist soil. Drying for even one or two days will result in poor germination.

Paper presented at the convention of the Texas Association of Nurserymen by Fred R. Brison, of the department of horticulture at the Texas Agricultural and Mechanical College.

The embryo in a seed is enclosed in a seed coat or covering. This coat or covering may delay or retard germination in at least three notable ways.

## Seed Covering.

(a) The seed's covering may be so hard that the absorption of water is slow, and germination is delayed accordingly. Redbud seeds have a hard covering and hence germinate poorly unless treated. The same is true of pine and black and honey locusts. Extreme drying should be prevented, since it aggravates the trouble.

(b) The seed coat may be so strong that it prevents emergence of the embryo. Some peach pits have strong, tight coverings, which prevent normal growth of the enclosed embryo, with the result that germination is long delayed.

(c) The seed coat may inhibit the absorption of oxygen necessary for germination. This is often the cause for poor germination of lettuce and cocklebur seeds. I do not recall a fruit or ornamental plant that produces seed of this class.

## Afterripening.

Some viable seeds will not germinate in due time even when planted under favorable conditions. They are perfectly good seeds and will germinate if given proper preliminary treatment. Two different conditions are responsible for delayed germination of seeds of this type.

(a) A seed normally contains an embryo, stored food and a seed coat. In some seeds the embryo is not fully developed when the seed is apparently mature. This is said to be the reason for slow germination of seeds of American holly and yaupon. When the seeds are harvested the embryo is still immature. It will continue its growth and be mature in a year or longer if stored under favorable conditions in the meantime.

(b) It is known that some seeds require a rest period before they will germinate. The exact nature of the rest period is not clearly understood. We do know that it is a real phenomenon, and not imaginary; that seeds will not germinate normally before the rest period is broken, and will after it is broken. Furthermore, we know how to break the rest period. The customary recommendation is to store seeds in moist packing material at temperatures of 33 to 45 degrees Fahrenheit for a period of time. The

duration of the treatment varies with the seed; for apple and pear it is eight to ten weeks; for plum, somewhat longer.

## Check Viability.

The seeds of most of the plants which you grow have characteristics which delay germination of the seeds. It is of academic interest to know the cause, but more important to know how to overcome the trouble. Let us use the peach for example. When peach seeds are planted, it is very important that they germinate without delay and grow off normally if they are to be budded on schedule. These precautionary things should be done:

(a) Crack sample pits and remove kernels. Soak kernels overnight in water and remove inner seed coat. Put seed in moist sand or peat at 70 to 75 degrees and, if viable, they will germinate in five to seven days.

(b) If viability is found to be satisfactory, the pits should be alternately soaked and dried in early fall, before the rest period is broken, to cause the hard bony pit to disintegrate. Soaking the seed for twenty-four hours, and allowing it to dry for three or four days, is effective in breaking the hard pit. It may be necessary to repeat the treatment two or three times.

(c) Stratify in well aerated moist packing material, such as acid peat, coarse sand or sphagnum moss, and hold at a temperature of 33 to 41 degrees for ten to twelve weeks. This should be done during the ten to twelve weeks immediately before planting time.

(d) Keep sand continuously moist after the rest period is broken. Avoid planting in dry soil.

## Cuttings.

Many of our horticultural plants are propagated by cuttings. A cutting is expected to do two things—to produce top growth and to develop a new root system. Most cuttings will make top growth; some develop new root systems readily, and others do not. The development of new roots depends upon certain conditions and treatments, such as temperature, aeration and chemical treatments. It also depends upon certain internal conditions of the cutting.

In the past we have been prone to accept that certain plants could be propagated by cutting and that others could not. When we recognize the various factors that influence the rooting of cuttings, we shall be able

to use the knowledge more widely in the propagation of plants. Let me emphasize this with three observations.

(a) The Muscadine grape does not ordinarily grow well from cuttings. It does not graft easily, and hence, propagation of named varieties becomes a problem. In a test in Georgia, cuttings were made at various times throughout the year. None were successful except those made on one date. Efforts to duplicate the results were not successful. But if conditions were such that a good percentage would root when planted on a given date, those conditions can and will be duplicated.

(b) Until a few years ago it was not considered that apples could be grown from cuttings. One variety, the Springdale, was shown to grow readily from cuttings, and it was discovered that it had root primordia or root initials, developed and present in the cambium layer.

(c) Pecan trees can be grown from stem cuttings. Efforts to root them in the past have not been particularly encouraging. Most investigations have planted the cuttings in late winter or early spring. Recently, the Texas A. and M. College department of horticulture received some very acceptable pecan trees which were grown from cuttings planted in October.

#### Grafting and Budding.

There have been no new or startling developments or changes in budding and grafting technique and practices.

(a) A new grape section has developed in Utah. The Concord grape is grown there. This is an American variety. In the past it has been customary to use American grapes as rootstock for European grapes. In Utah European rootstock is now used for the Concord variety. With this combination, the growers reduce the prevalence of chlorosis and obtain phenomenal yields from the Concord.

(b) Some of you propagate pear trees. Blight is a problem on nursery stock and in the orchard. Nurserymen in some parts of the country are using the Old Home and certain other varieties as rootstock. These are French pears, but practically immune to fire blight. They are using it to grow the root system, trunk and framework of the tree. When it has developed the proper size, it is top-worked to the desired variety. Old Home does not come true from seeds and does not grow well from cuttings. The method that has been found practicable is to graft a long scion onto a relatively short nurse-root. The resulting graft is planted deeply. The grafted root supports the plant at first, but during the two years the scion develops roots which aid in supporting the trees. It

is desired, of course, that the scion develop roots, since they are immune to blight whereas those of the nurse-root are not. This is an expensive way to grow a pear tree, but it produces a tree with a root system and trunk that are immune to the dreaded blight. Blight may kill the top in severe years, but the trees have a root system and trunk on which to rebuild and can quickly recondition themselves.

#### VIRGINIA PRESIDENT.

A. J. Shoosmith, recently elected president of the Virginia Nurserymen's Association, has been associated with his father in the operation of Southside Nurseries, Richmond,



A. J. Shoosmith.

Va., since the completion of his formal education. An exception was during World War II, when he served in the Quartermaster Corps and with the Seventieth Infantry division.

"Bert" Shoosmith attended Virginia Polytechnic Institute and the Harvard school of landscape architecture. He is a member of the Richmond Kiwanis Club and of the Chesterfield post of the American Legion. His firm, Southside Nurseries, offers a landscape service in addition to nursery stock at wholesale and retail.

#### LESSON IN FAILURE CHART.

The number and rate of failures in American business for eighty-nine years, including the three principal wars and the major boom and depression periods, are shown in an instructive chart just prepared by Dun & Bradstreet, Inc.

The chart shows an increasing similarity to the postwar trend of fail-

ures for World War I and II. This is especially evident in a comparison of the failure rate and average liability for 1918 to 1923 and 1942 to the end of 1945.

While the number of failures is low, there are a slight upturn in number and a decided increase in average liability. Average liabilities in 1942 were \$10,713 against \$37,524 for 1945. This figure, reflecting some of the increase in prices, is currently \$44,000.

"It is well to remember that in free competition, good times or bad, failures are higher than under war controls, when merchandise shortages prevent some merchants from exercising bad judgment and limited inventories may be a blessing in disguise," comments A. M. Sullivan, associate editor of Dun's Review.

"Increased productivity naturally brings greater sales activity, which in turn invites a larger and wider spread of financial risks. During the past year commercial population has increased at a continually accelerated rate. The shrinkage of stores, shops and services, due to four years of war, has been made up in the first year of peace.

"America may be for the moment consuming as much as, or even more than, it can produce. But this most probably is a temporary condition, and our machines and techniques have a faster acceleration than the consuming power of the nation. Consumption is the gauge of prosperity.

"The prospects for business are inviting, but history has a habit of repeating itself with some interesting and often painful variations. The hands at the controls of the credit grantors of this country should be guided with the proper balance of imagination and experience, of daring and caution."

#### EAST TEXAS OFFICERS.

Representatives of three Tyler, Tex., firms were elected officers of the East Texas Rose Growers' Association at a meeting held there September 14. Homer W. Eikner, Vermay Nursery Co., was unanimously elected president; Howard W. Ford, North Tyler Nursery, will serve as vice-president, and L. B. Dean, Arp Nursery Co., will be the new secretary-treasurer. Following the business meeting, 125 members and guests enjoyed a barbecue dinner and dancing.

EXPECTING to plant 2,000 evergreen seedlings on his own land this fall, D. B. Snell, Cement City, Mich., has been in the nursery business for two months as a native tree dealer.



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## End o Pest...

the insecticide and fungicide your customers have been waiting for... helps control all 3 major types of garden pests!

CHEWING INSECTS • SUCKING INSECTS • FUNGUS DISEASES

Your customers haven't the time to do the same scientific job of solving their insect and fungus disease problems as you. They haven't your knowledge of specifics for controlling the various types. And so, to solve their problems... to provide you with a product you can recommend with confidence, the makers of Vigoro are happy to offer End o Pest. It supplies the quick, easy solution to insect and fungus disease problems. For edible fruits and vegetables; also shrubs, flowers and trees. Display End o Pest with Vigoro... make 2 sales and 2 profits.

End o Pest comes ready to use in the handy new dust gun package; cartridge refills; also in the 2-pound economy package as well as small sifter top package for house plants.



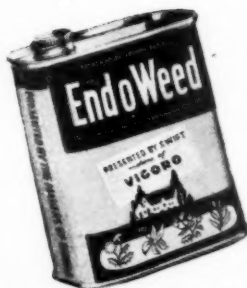
End o Pest comes ready to use in the handy new dust gun package; cartridge refills; also in the small sifter top package for house plants.

# PLUS

## End o Weed...

dooms over 50 different weeds to certain death... roots and all!

• This weed killer solves a tiresome chore... one that's been a bother to most of your customers. And while helping them, you can make this additional sale... another profit. End o Weed kills dandelions, chickweed, plantain (over 50 different weeds) once and for all. 8 ounces treat 2,000 square feet of lawn area. Mention End o Weed to your customers when they order Vigoro. Available in all popular sizes.



1.

A thriving dandelion, surrounded by weakened grass, is sprayed with End o Weed.



2.

A few days later, when dandelion starts to die, feed the lawn area Vigoro.



**End o Weed!**

Dandelion gone... grass begins to thrive.

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## Coming Events

### MEETING CALENDAR.

For the benefit of state association officers who wish to set the time of midwinter meetings with a minimum of conflict, the following list is given of convention dates already made known. Secretaries of other associations are invited to notify the editor of further meeting dates as soon as they are set.

December 2 and 3, Minnesota State Nurserymen's Association, Radisson hotel, Minneapolis.

December 4, Western Pennsylvania Nurserymen's Association, Webster Hall hotel, Pittsburgh.

December 4 and 5, Wisconsin Nurserymen's Association, Hotel Schroeder, Milwaukee.

January 7 and 8, Western Association of Nurserymen, Kansas City, Mo.

January 8 to 10, Indiana Association of Nurserymen, Purdue University, La Fayette.

January 10 and 11, Iowa Nurserymen's Association, Hotel Kirkwood, Des Moines.

January 14 to 16, Illinois Association of Nurserymen, Sherman hotel, Chicago.

January 16 and 17, Oklahoma State Nurserymen's Association, Huckins hotel, Oklahoma City.

January 22, Connecticut Nurserymen's Association, Waverly Inn, Cheshire.

January 22, New Jersey Association of Nurserymen, War Memorial building, Trenton.

January 23 and 24, Ohio Nurserymen's Association, Neil House, Columbus.

January 29 to 31, Michigan Association of Nurserymen, Pantlind hotel, Grand Rapids.

February 4 to 6, New England Nurserymen's Association, Hotel Statler, Boston, Mass.

### OHIO TO HONOR PIONEERS.

Special attention will be paid to pioneer nurserymen at "Ye Olde Time Dinner," a feature of the Ohio Nurserymen's Association convention, to be held January 23 and 24 at Neil House, Columbus. This will be the fortieth annual convention of the Ohio group.

### GARDEN CONFERENCE.

A national garden conference, which will lay the groundwork for a broad garden program for 1947, has been called for November 7 and 8 at Washington, D. C., by Paul C. Stark, director of the national garden program of the United States Department of Agriculture. The conference program will consist of organized discussions on the general theme "Gardens for Food, Health and Good Living," and panel discussions will center on major problems of interest to leaders in the garden and horticultural fields who have been invited to attend.

### MICHIGAN MEETING.

The silver anniversary meeting of the Michigan Association of Nurserymen will be held January 29 to 30 at the Pantlind hotel, Grand Rapids, according to Secretary Harold E. Hunziker. Activities will be started with a get-together party on the evening of January 29.

### WISCONSIN DATES SET.

The annual winter meeting of the Wisconsin Nurserymen's Association will be held December 4 and 5 at the Hotel Schroeder, Milwaukee. The time for the Wisconsin meeting has been permanently set for the first Wednesday and Thursday following the winter meeting of the Minnesota State Nurserymen's Association every year, so that it will be easier for nurserymen in these states to plan their work and avoid conflicts.

### PLAN ILLINOIS PROGRAM.

Members of the board of directors of the Illinois State Nurserymen's Association were the guests of Richard P. Theidel, at the Hinsdale Nurseries, Hinsdale, Ill., October 3, as were also members of the board who had served in other years while he has been on it, and a few other guests. Eighteen persons attended the meeting and enjoyed a fine luncheon

at the Spinning Wheel restaurant. The directors discussed the program for the coming convention of the Illinois association.

The convention will be held at the Hotel Sherman, Chicago, January 14 to 16. The directors were concerned because of the lack of advance reservations for hotel rooms. It is important to make such reservations early because hotels at Chicago will be crowded at the time of the meeting. The fire at the La Salle hotel several months ago caused such damage that quarters there could not be made ready in time for the meeting, and it will be held at the Hotel Sherman.

The convention sessions will be held on the afternoon of the three days. The first afternoon, as in previous years, will be given over to matters of national interest, with the main speaker Richard P. White, secretary of the American Association of Nurserymen. The A. A. N. executive committee will meet at Chicago just prior to the Illinois convention.

The program on the second afternoon will be given over to a discussion of ornamental plants. Dr. L. R. Tehon, of the Illinois Natural History Survey, who has been doing considerable work on the ecology of native woody shrubs and trees in Illinois, will talk on plant zones in the state, with particular reference to local variations within its borders from the broad sweeping lines of the plant zones shown in Rehder's Manual. Dr. M. J. Dorsey, head of the department of horticulture at the University of Illinois, will talk briefly

## WE'RE SORRY—

## but

There really won't be anything we can do to help you on hotel rooms for that meeting in January if you have failed to make early reservations. If there is any possibility that you will attend the meeting your reservation should be made at once.

Send your reservations now to the Hotel Sherman, Randolph and Clark Streets, Chicago 1, Illinois.

Plan to "double up." The rooms at the Sherman are large and during the war most of them were equipped with twin beds. The proportion of single rooms is very small—your chances are better if you ask for a double room.

Plan to arrive not later than early Monday, January 13. Week-end crowds are lightest these days.

THIRTY-FIRST ANNUAL CONVENTION—  
JANUARY 14-15-16, 1947

## ILLINOIS STATE NURSERYMEN'S ASSOCIATION

# FOREST NURSERY COMPANY, INC.

## McMinnville, Tenn.

# WHOLESALE PRICE LIST

## FRUIT TREES

We offer for fall 1946 and spring 1947 delivery the following list of Fruit Trees in the following grades and varieties subject to how they make up. Prospects are very good at this time for a nice crop. All trees are first-class quality and up to grade. Orders accepted subject to any injury or loss from causes beyond our control. We are careful to keep varieties labeled true to name and will replace on proper proof any stock that may prove otherwise, free of charge, or refund the purchase price, but it is mutually agreed that we shall not be liable for any amount greater than the purchase price paid us.

NO CLAIMS WILL BE CONSIDERED UNLESS MADE IN WRITING WITHIN TEN DAYS AFTER RECEIPT OF GOODS.

TERMS: (3%) Three per cent discount and free packing for cash with order; (2%) Two per cent 10 days, or 30 days net from date of invoice. Open accounts to those with approved credit ratings. (25%) Twenty-five per cent cash required before shipment on C.O.D. orders. Packing charges at cost on open account and C.O.D. orders.

Suggest you get your orders in promptly, as our supplies are limited in fruit trees.

### MULTIPLE APPLE

	Per 10	Per 100
5-In-One, 11/16-inch and up.....	\$15.00	\$125.00
5-In-One, 9/16 to 11/16-inch.....	12.50	100.00
5-In-One, 7/16 to 9/16-inch.....	10.00	90.00
4-In-One, 11/16-inch and up.....	12.50	100.00
4-In-One, 9/16 to 11/16-inch.....	10.00	90.00
4-In-One, 7/16 to 9/16-inch.....	8.50	75.00
3-In-One, 11/16-inch and up.....	10.00	90.00
3-In-One, 9/16 to 11/16-inch.....	8.50	75.00
3-In-One, 7/16 to 9/16-inch.....	7.00	60.00

Varities budded: Anoka, Grimes Golden, Jonathan, Red and Yellow Delicious and Stayman Winesap.

### APPLE (Two-year) Well Br. Assorted Varieties

	Per 10	Per 100	Per 1000
7/16 to 9/16-inch, 3 feet and up....	\$4.00	\$35.00	\$300.00
9/16 to 11/16-inch, 4 feet and up....	5.00	45.00	400.00
11/16-inch and up, 4 1/2 feet and up	6.50	60.00	550.00

Varities as follows: Anoka, Grimes Golden, Delicious Double Red, Delicious Yellow, Red Jonathan, Common Red Winesap, Dbl. Red Stayman Winesap, Turley and York Imperial.

### APPLE WHIPS (One-year Grafts)

	Per 10	Per 100	Per 1000
18 to 24 inches.....	\$2.00	\$17.50	\$150.00
2 to 3 feet.....	2.50	22.50	200.00
3 to 4 feet.....	3.00	27.50	250.00
4 to 5 feet.....	3.50	32.50	300.00

Varities as follows: Anoka, Delicious Double Red, Delicious Yellow, Duchess, Grimes Golden, Jonathan, Red June, Stayman Winesap, Yellow Transparent, Yates.

### APRICOTS, DORMANT BUD

	Per 10	Per 100
3 feet and up, 7/16 to 9/16-inch.....	\$7.00	\$65.00
4 feet and up, 9/16 to 11/16-inch.....	8.50	80.00

Varities: Superb, Early Golden.

### APRICOT AND PLUM

(June Buds)

	Per 10	Per 100	Per 1000
18 to 24 inches.....	\$2.50	\$22.50	\$200.00
2 to 3 feet.....	3.00	27.50	250.00
3 to 4 feet.....	4.50	40.00	350.00
4 to 5 feet.....	7.00	60.00	.....

Varities: (Apricot) Improved Cluster, Moorpark, Superb, Early Golden, Unnamed.

Varities: (Plum) Burbank, Red June, Abundance, Bruce, Kelsey.

### PEACH ASSORTED — Two-year June Buds

(Nice, clean, well balanced trees.)

	Per 10	Per 100	Per 1000
7/16 to 9/16-inch, 3 feet and up....	\$5.00	\$45.00	\$400.00
9/16 to 11/16-inch, 4 feet and up....	6.50	60.00	550.00
11/16-inch and up, 4 1/2 feet and up	8.00	75.00	700.00

Varities as follows: Belle of Georgia, Brackett, Elberta Regular, Indian Cling, Red Nectarine, Red Bird, Rochester and Southhaven.

### JUNE-BUD PEACH

	Per 10	Per 100	Per 1000
6 to 12 inches.....	\$0.70	\$ 8.00	\$ 60.00
12 to 18 inches.....	1.75	12.50	100.00
18 to 24 inches.....	2.00	17.50	150.00
24 to 30 inches, 5/16 to 7/16-inch....	3.00	25.00	200.00
24 to 30 inches, 7/16 to 9/16-inch....	3.50	30.00	250.00
30 to 36 inches, 5/16 to 7/16-inch....	4.00	35.00	300.00
30 to 36 inches, 7/16 to 9/16-inch....	4.50	37.50	350.00

Varities as follows: Brackett, Belle of Georgia, Champion, Carman, Elberta, Early Rose, Early Hiley, Hiley, Golden Jubilee, J. H. Hale, Halehaven, Red Haven, Southhaven, Indian Cling, Polly, Red Bird, Rochester, Shippers Late Red.

	Per 10	Per 100	Per 1000
3 feet and up, 7/16 to 9/16-inch....	\$5.00	\$45.00	\$400.00

Varities as follows: Elberta, Early Hiley, Golden Jubilee, Hiley, J. H. Hale, Shippers Late Red.

### PECANS

	Each	Per 10	Per 100
2 to 3 feet.....	\$1.75	\$15.00	\$125.00
3 to 4 feet.....	2.25	20.00	175.00
4 to 5 feet.....	2.75	25.00	225.00
5 to 6 feet.....	3.25	30.00	.....

Varities: Stuart, Success, Schley, Burkett, Moneymaker and Moore.

### CHERRIES

	Each	Per 10	Per 100
11/16-inch to 1-inch.....	\$1.60	\$14.00	\$125.00

Varities: Montmorency, Early Richmond, Black Tatarian.

### PEAR, KIEFFER One-year Whips

	Per 10	Per 100
12 to 18 inches.....	\$3.50	\$25.00
18 to 24 inches.....	4.50	35.00
2 to 3 feet.....	6.00	50.00
3 to 4 feet.....	7.00	60.00

### PEAR, KIEFFER (Two-year)

	Per 10	Per 100
5/16 to 7/16-inch, 2 1/2 feet and up....	\$ 6.00	\$55.00
7/16 to 9/16-inch, 3 1/2 feet and up....	8.50	80.00
9/16 to 11/16-inch, 4 feet and up.....	10.00	90.00

Pears, Cherries or Pecans sold only in connection with other fruit trees. One-third of cash value of fruit tree orders may be in Pear, Cherry or Pecan.



about the proposed work of the joint committee of his department and the Illinois association in developing a list of landscape plants to be recommended for the various sections of the state.

The program is expected to be developed further at the next meeting of the directors, November 7, when they will be guests of Roy Clavey at the offices of the F. D. Clavey Ravinia Nurseries, Deerfield.

At the meeting, H. F. Seifert, head of the state nursery inspection service, reported that the number of dealers in nursery stock who had obtained certificates from the Illinois department of agriculture had fallen very low during the war, but at the present time many were in business again and new ones were starting up without having yet applied for dealers' certificates.

He asked the cooperation of wholesale nurseries in referring to him the names of any dealers not holding dealers' certificates. The wholesalers present agreed to require that all new customers among dealers and landscape gardeners should be asked to show evidence that they had the necessary state certificate before being furnished stock at wholesale.

#### SET CONNECTICUT DATES.

Dates have been set for the winter meeting of the Connecticut Nurserymen's Association. According to A. C. Bird, secretary, the meeting will be held January 22 at Waverly Inn, Cheshire. Eight new members have joined the association this fall, and it is looking forward to an active year.

#### PARK EXECUTIVES MEET.

The forty-sixth annual convention of the American Institute of Park Executives will be held at St. Louis, Mo., November 17 to 20.

The first of several panel discussions will be presented Monday afternoon, November 18. Robert E. Everly, superintendent of parks at Glencoe, Ill., will lead the discussion of "Present Problems and How to Meet Them." Topics to be considered include salaries and wages, in-service training and vandalism. The theme of present problems will be continued Monday evening, with a panel discussion of "Maintenance, Operations, Equipment and Materials," led by Roberts Mann, editor of the Maintenance Mart department of Parks & Recreation.

Tuesday's discussion theme will shift the emphasis from the consideration of immediate problems to

practical park planning for the future. Tuesday evening a special meeting, open to the public, will be held under the auspices of the Institute Associate Membership. Addresses will be given by Roberts Mann on "Policies in Conservation Education"; by Walter L. Wirth, of New Haven, Conn., on "Youth Activities," and by Henry Teuscher, curator of the Montreal Botanical Garden, on "Window Box Gardening As a Civic Beautification Project."

#### ARBORETUM GROUP MEETS.

The American Association of Botanical Gardens and Arboreta will have special programs and discussion sessions during the convention of the American Institute of Park Executives when it meets at St. Louis, Mo., November 17 to 20. Topics for discussion include "United Horticulture for the United States," "Future Plant Studies," "Displays for the Public," "The University of Washington Arboretum," "Labels" and "A National Arboretum."

Tuesday, November 19, will be an active day for members of the association. A breakfast session with park horticulturists will be followed by a trip to the Missouri Botanical Garden, where members will be guests of Director George T. Moore, Superintendent George H. Pring and other members of the staff. After an hour's inspection, they will be taken to the arboretum at Gray Summit, where the orchid range will be visited before luncheon at the arboretum trail house. Talks by A. P. Beil-

mann on "Some Unusual Features of an Arboretum" and by Edgar Anderson on "The Box Garden" will be featured after dinner. A brief trip through the grounds of the arboretum will be made, with inspection of the wild flower trail and the box garden.

#### KANSAS FRUIT MEETING.

The annual meeting of the Kansas State Horticultural Society will be held at the Hotel Lassen, Wichita, December 12 and 13. Out-of-state speakers include Stanley Johnson, of South Haven, Mich., who will discuss "New Practices and Varieties of Peaches"; Dr. J. E. Vaile, of the department of horticulture and forestry at the University of Arkansas, who will describe "New Developments and Possibilities in Small Fruit Culture," and Dr. F. B. Cross, head of the department of horticulture at Oklahoma Agricultural and Mechanical College, who will speak on "Pecans for Kansas."

ORGANIZED September 1, the Litchfield Hills Landscape Co., West Cornwall, Conn., is owned by P. H. Staub.

THE Grosse Pointe and Eastern Michigan Horticultural Society will celebrate its thirtieth anniversary November 14. Tom Pearson, chairman of the anniversary celebration, will open the program with introductory remarks, and one of the main speakers of the evening will be Vincent R. De Petris.

## YEARLING PEACH TREES

2-yr. Roots, 1-yr. Tops

	Per 10	Per 100	Per 1000
2 to 3 ft., 5/16 to 7/16-in.	\$5.00	\$40.00	\$300.00
3 to 4 ft., 7/16 to 9/16-in.	5.50	45.00	350.00
4 to 5 ft., 9/16 to 11/16-in.	6.00	50.00	400.00
5 to 6 ft., 11/16-in. and up.	7.00	60.00	500.00

Varieties. Listed in ripening order.

Mayflower	Slappey	Elberta, Red	Indian Cling
Early Rose	Hiley	Greenville Cling	Late Crawford
Golden Jubilee	Champion	Augbert	Sept. Belle
Halehaven	Killian Cling	(Late Elberta)	Krummel's Late
		J. H. Hale	

F.O.B. Hickory, N. C., packing additional. Free packing when cash accompanies order. All prices subject to stock being unsold on receipt of order.

Also, complete line of Coniferous and Broad-leaved Evergreens.

### THE HOWARD-HICKORY CO.

Hickory, N. C.

## SHADE TREE BARGAINS

Young, cultivated trees with good heads. Shade trees are scarce, especially Sycamores and Elms. Prices are good for orders placed this fall. To facilitate shipping, we cannot accept orders for less than a truckload or carload.

		Per 100
100 Horse Chestnut.....	1 1/4 to 1 1/2 ins.	\$250.00
100 Hackberry.....	1 3/4 to 2 ins.	185.00
300 Hackberry.....	2 to 2 1/2 ins.	275.00
100 American Ash.....	1 1/2 to 1 3/4 ins.	175.00
100 American Ash.....	1 3/4 to 2 ins.	225.00
100 American Ash.....	2 to 2 1/2 ins.	250.00
100 Lombardy Poplar.....	1 3/4 to 2 ins.	225.00
400 American Sycamore.....	1 1/2 to 1 3/4 ins.	225.00
200 American Sycamore.....	1 3/4 to 2 ins.	300.00
200 American Sycamore.....	2 to 2 1/2 ins.	325.00
300 Honey Locust.....	1 1/4 to 1 1/2 ins.	200.00
200 Honey Locust.....	1 1/2 to 1 3/4 ins.	225.00
100 Honey Locust.....	1 3/4 to 2 ins.	250.00
400 Thornless Honey Locust.....	1 1/4 to 1 1/2 ins.	225.00
100 Thornless Honey Locust.....	1 1/2 to 1 3/4 ins.	250.00
800 American Elm.....	1 1/4 to 1 1/2 ins.	150.00
900 American Elm.....	1 1/2 to 1 3/4 ins.	175.00
800 American Elm.....	1 3/4 to 2 ins.	200.00
400 Chinese Elm.....	1 1/4 to 1 1/2 ins.	125.00
800 Chinese Elm.....	1 1/2 to 1 3/4 ins.	175.00
500 Chinese Elm.....	1 3/4 to 2 ins.	200.00
100 Moline Elm.....	1 3/4 to 2 ins.	325.00
100 Moline Elm.....	2 to 2 1/4 ins.	350.00
300 Norway Maple.....	1 1/4 to 1 1/2 ins.	225.00
200 Norway Maple.....	1 1/2 to 1 3/4 ins.	250.00

**I. E. ILGENFRITZ' SONS CO.**  
Monroe, Mich.



# United Horticulture

About eighty leaders in horticulture in its various branches—scientific, professional, commercial and amateur—were invited to Cleveland, O., October 8 to 10, for a conference initiated by a group which had incorporated the American Horticultural Council, Inc. Its slogan, "United Horticulture," was discussed from various angles, without formulation of a program of immediate action. Instead it was decided that for the coming year a paid executive staff should work full time accumulating data which will form the basis for a permanent organization.

A new board of directors was elected and authorized to hire a full-time secretary to conduct the business of the organization for the ensuing year. The directors elected comprised six of the seven members of the organization committee, as follows: Robert Pyle, West Grove, Pa.; E. L. D. Seymour, New York, N. Y.; Clement G. Bowers, Maine, N. Y.; Arno H. Nehrling, Boston, Mass.; R. Milton Carleton, Chicago, Ill., and J. Franklin Styer, Concordville, Pa.

New directors chosen were A. McKee, Cleveland, O.; Mrs. Will Lake, Fort Worth, Tex.; Dr. Walter E. Lammerts, La Canada, Cal.; Mrs. E. Page Allinson, West Chester, Pa.; Mrs. Lewis M. Hull, Boonton, N. J.; C. Eugene Pfister, Chicago, Ill.; Dr. H. B. Tukey, East Lansing, Mich.; Paul Young, Cleveland, O., and Dr. Warren B. Mack, State College, Pa.

The assertion was repeatedly made that the conception of united horticulture should not interfere with any existing horticultural organization; so it was unanimously decided that for the following year it should be an organization of individuals only. It was proposed to raise between \$25,000 and \$30,000, the amount estimated by the finance committee as sufficient for the work of investigation and planning to be done during the coming year by the interim organization of individuals. Another conference is to be called a year hence, when the results of this preliminary work will be presented, together with definite recommendations for a permanent organization.

The sessions were opened Tuesday morning, October 8, by C. Eugene Pfister, Chicago, Ill., president of the Men's Garden Club of America and program chairman for the conference. Robert Pyle, West Grove, Pa., president of the organization committee, outlined the purposes of the American Horticultural Council, Inc., in

the opening address, entitled "Why We Are Here."

Separate discussion periods were allotted to the four major interests in horticulture—scientific, professional, commercial and amateur. On behalf of the scientific group, Dr. H. B. Tukey, professor of horticulture at Michigan State College, East Lansing, spoke on "Some Needs in Scientific Horticulture in Which United Horticulture Might Prove a Force." Harry R. O'Brien, Worthington, O., of the editorial staff of *Better Homes and Gardens*, spoke for the professional group on "An Annual Directory of What Is New, Who Is Who, Events and Organizations, for the Plant Lover, from the Editors."

The speaker for the commercial group was Dr. R. Milton Carleton, retail manager of Vaughan's Seed Store, Chicago, Ill., whose topic was "Mutual Gains for Producer and Consumer in an Adequate Program for Testing and Awards." W. Ray Hastings, Harrisburg, Pa., offered further suggestion. Clarence Siebenthaler, Dayton, O., was chairman of this group.

Mrs. E. Page Allinson, of West Chester, Pa., chairman of the public relations committee of the National Council of State Garden Clubs, spoke for the amateurs on the topic, "Some Needs in Amateur Horticulture in Which United Horticulture Might Prove a Force."

The outstanding speaker of the conference was Dr. Liberty Hyde Bailey, who came from Ithaca, N. Y., upon urgent invitation, to give his view of the purpose of the conference in a talk entitled "Horticulture United, as I See It."

The roles of federal and state governments in united horticulture formed the first topic at the session held Wednesday afternoon. Richard P. White, executive secretary of the American Association of Nurserymen, Washington, D. C., was the chairman for this group, and Dr. R. J. Haskell, of the United States Department of Agriculture extension service, Washington, D. C., was the speaker.

Dr. J. H. Gourley, professor of horticulture at Ohio State University, discussed "Horticulture Looks Ahead" at the informal dinner held that evening.

Thursday morning's session was devoted to a meeting of the new board of directors and a tour of estates and gardens in the vicinity.

The program listed 138 persons who by October 1 had paid \$10 to become founding members of American Horticultural Council, Inc. Amateur and professional interests were most largely represented. About twenty nurserymen were on the list, of which a half dozen were present.

## ELECT UTAH OFFICERS.

Jess Porter, of Porter-Walton Co., Salt Lake City, was chosen president of the Utah Association of Nurserymen at a meeting at Salt Lake City.

## LINING-OUT STOCK

for Fall 1946

	Per 100	Per 1000
RED-LEAVED BARBERRY, strong 1-yr. sdgls., 3 to 9 ins.....	\$ 5.00	\$ 45.00
This is a very good dark red strain, grown in rows over the field, with plenty of room, assuring sturdy seedlings with strong roots.		
AMPELOPSIS VEITCHI (Boston Ivy), strong 1-yr. sdgls.....	6.00	50.00
JUNIPERUS STRICTA, 1-yr. tr., 5 to 8 ins.....	30.00	250.00
JUNIPERUS MEYERI, 3-yr. tr., 8 to 12 ins.....	40.00	350.00
LABURNUM VULGARE, strong 1-yr. sdgls., grafting size.....	10.00	80.00
TAXUS CUSPIDATA, spreading, 2-yr. tr., 8 to 12 ins.....	30.00	250.00
TAXUS CAPITATA, upright, from seed, 4-yr. tr., 6 to 8 ins.....	40.00	350.00
TAXUS CAPITATA, upright, from seed, 4-yr. tr., 8 to 10 ins.....	50.00	450.00
TAXUS CAPITATA, upright, from seed, 5-yr. tr., 10 to 12 ins.....	60.00	550.00
TAXUS HATFIELDI (true), 3-yr. tr., 12 to 15 ins.....	45.00	400.00
TAXUS HICKSI, 3-yr. tr., 10 to 15 ins.....	40.00	350.00
THUJA OCC. NIGRA, dark green American, 3-yr. tr., 12 to 18 ins.....	35.00	300.00
THUJA OCC. PYRAMIDALIS, 1-yr. grafts, tr., 10 to 15 ins.....	45.00	.....
THUJA OCC. PYRAMIDALIS, 2-yr. grafts, tr., 18 to 24 ins.....	65.00	600.00
THUJA OCC. WOODWARDI (globe), 3-yr. tr., 9 to 12 ins.....	35.00	.....
VIBURNUM CARLESI, 1-yr. grafts, tr.....	75.00	650.00

Ask for list of other liners.

## C. HOOGENDOORN

Turner Road

Newport, R. I.

# STREAMLINER

## The New Everbearing Strawberry

We have grown Streamliner for three years and find it much better than any other Everbearer we have ever grown. We recommend that you take advantage of the publicity which will be given Streamliner during the coming season by listing it in your catalog and advertising. All leading growers who have thoroughly tested Streamliner state without fear of contradiction that it is the best of all the Everbearers. Streamliner has real strawberry flavor, is rich red color throughout, is excellent for eating fresh and is recommended for canning or freezing. Its spring crop compares favorably to that produced by today's leading standard varieties. Very productive. Streamliner makes a good fruiting bed.

If you are interested in large numbers of Strawberry plants, or in our pack-out service (whereby shipments are made direct to your customers under your tags), write for details. We have facilities to take care of your Strawberry plant business. Let us figure with you on your particular requirements.

STANDARD VARIETIES	Per 25	Per 100	Per 250	Per 1000
Blakemore, Dunlap, Missionary.....	\$0.35	\$1.15	\$2.00	\$7.00
Ambrosia Late, Big Joe, Gandy, Klondike, Massey, Maytime, Parsons Beauty, Robinson, Suwannee, Southland, Temple .....	.40	1.25	2.25	8.00
Catskill, Chesapeake, Dorsett, Fairfax, Fairpeake, Midland, Premier, Redstar, Starbright .....	.45	1.40	2.50	9.00

EVERBEARING VARIETIES	Per 25	Per 100	Per 250	Per 1000
Gem, Gemzeta, Mastodon, Progressive, Evermore (Minn. 1166).....	\$0.70	\$2.25	\$4.50	\$16.00
New Streamliner .....	1.00	3.25	7.00	25.00

No extra charge is made for the package or pecking on Strawberry plant orders. Prices quoted are for delivery as wanted during the coming shipping season, starting November 1, 1946, and ending June 1, 1947, and apply as follows:

25 to 75 plants of one variety at the 25 rate.  
100 to 225 plants of one variety at the 100 rate.  
250 to 475 plants of one variety at the 250 rate.  
500 plants or more of one variety at the 1000 rate.

All quotations are F.O.B. Selbyville, subject to stock being unsold upon receipt of order.

Write for a copy of our wholesale list, offering a general line of fruit plants, garden roots, also evergreen and deciduous stock. Please use your printed stationery, showing you are entitled to wholesale rates, when requesting trade prices.

## BUNTINGS' NURSERIES, INC.

Box 3

Selbyville, Delaware

September 10, and William Neff, of Mount Olympus Nursery, Salt Lake City, and Ray Kirkland, of Kirkland Nursery Co., Bountiful, were elected vice-president and secretary-treasurer, respectively. The following directors were elected: Robert Atkinson, Harley Glover, George Barrett, Douglas Walton, Ray Burup, Mr. McAnelly and Mr. Nielson.

Twenty-five nurserymen attended the meeting. Richard P. White, executive secretary of the American Association of Nurserymen, spoke to the group.

JOSEPH HARRISON, of Harrison Bros. Nurseries, Berlin, Md., recently received the Democratic nomination for the board of county commissioners of Worcester county.

STARTING their own business after sixteen years' experience with other nurseries, Claude W. Moore and H. D. Howell have established the Campus Nursery, at 2419-A Broadway, Lubbock, Tex.

## EVERGREENS

We are pleased to offer you the following Evergreens for fall delivery. Each

Norway Spruce, 2 to 2½ ft.....	\$1.75
Norway Spruce, 2½ to 3 ft.....	2.50
Norway Spruce, 3 to 4 ft.....	3.25
Juniper Pfitzeriana, 3 to 4 ft.....	6.00
Juniper Virg. Burki, 4 to 5 ft.....	5.00
Juniper Virg. Canadensis, 5 to 6 ft.....	6.50
Juniper Virg. Glauca, 5 to 6 ft.....	6.50
Juniper Virg. Keteleeri, 5 to 6 ft.....	6.50
Mugho Pine, 15 to 18 ins.....	1.75
Thuja Occ. Woodwardi, 2 to 2½ ft.....	2.25
Tsuga Canadensis, 3½ to 4 ft.....	4.00
Tsuga Canadensis, 4 to 4½ ft.....	4.75
Tsuga Canadensis, 4½ to 5 ft.....	5.50
Taxus Canadensis Nana, 15 to 18 ins.....	4.00

EAGLE CREEK NURSERY CO.

NEW AUGUSTA, IND.

## HEMLOCKS

KALMIA, RHODODENDRON, AZALEA

CURTIS NURSERIES

CALLICOON

NEW YORK

## SPECIMEN TAXUS

ORIGINAL STOCK PLANTS  
20-25 YEARS OLD  
WELL SHEARED

30 CUSP. VERMEULEN.....	\$10.00 to \$75.00 ea.
Pyramid and other desired shapes.	
Heavy plants, 4½x4½ ft. to 6½x6½ ft.	
10 MEDIA KELSEYI.....	\$75.00 ea.
Broad, heavy, berry-bearing plants.	
Good form, 6x6 ft. to 7x6½ ft.	

See them for yourself to appreciate them. Call me for directions from N. Y. C. Phone: Westbury 328. Plants cannot be removed from Beetle Area. Prices are dug for pickup at nursery.

JOHN VERMEULEN

Westbury, Long Island, N. Y.

## Ornamental Trees, Shrubs and Evergreens

Write For Our Wholesale Trade List

W.-T. Smith Corporation

Telephone 2689

GENEVA, N. Y.

## Some European Alpines

By C. W. Wood

I am tempted to mention *Coronilla minima* in this series on European alpines, because of its pretty yellow flowers and prostrate growth, but it is not a true alpine. It is found on low hills in southern Europe, we are told, and therefore does not qualify for our present notes. A close relative, *onobrychis*, will be discussed instead. There are several species of *onobrychis* found in European hills and upward into the alpine regions, one, at least, reaching 6,500 feet. This one, *O. montana*, could well form a part of our alpine gardens, being both easy to grow in light, well drained soil in sun and quite showy, with its bright rose pea flowers. It is, no doubt, little more than an alpine form of the common fodder plant, sainfoin (*O. viciaefolia*), of southern Europe, but that fact should discourage no one from giving it a trial. If you do not find *O. montana*, but see *O. arenaria* or *O. saxatilis*, be assured that they will do almost as well, being little different except in flower color (always an inconstant characteristic in the sainfoins) and height. Height is also an inconstant characteristic, though *O. montana* rarely exceeded a few inches here in northern Michigan in its subdecumbent stems. Grow *onobrychis* plants from seeds.

There is a group of legumes, often separated from lathyrus under the name of orobus, because the plants are nonclimbers, which contains much, good garden material. Because of its lowland home, not much of it qualifies for our present inquiry. However, a few, including *L. luteus*, *L. montanus* and *L. vernus*, should find places in gardens. Considering floriferousness and color, I think I should choose the first named. *L. luteus* gets up to 6,000 feet in the central Alps, we are told, but it behaves like a lowlander when transferred to gardens. Most writers on the subject say it does well in full sun, but here in northern Michigan it was best in about half shade in a rather leafy, light soil. It got up to fifteen inches in height, with pretty legume leaves and many-flowered (as many as fifteen) racemes of normally yellow flowers. I say "normally yellow" because that is what they start out to be, or rather, pale yellow, which turns bright yellow and then yellow-brown. When young, middle-aged and old flowers are on the same plant, it is quite unique.

Perhaps a majority of vetches are either rampant or weedy, or both, and should not be admitted to the flower garden, but there are a few that have wandered up mountainsides, losing stature and gaining in beauty as they have ascended. Of these, *Vicia pyrenaica*, from the Pyrenees as the name implies, is a real charmer, perhaps the best of its kind. As it grew here in poor, gravelly soil in full sun, it grew about four inches tall, with the pretty divided leaves of its kind and violet-colored flowers in June. The flowers are large for the size of the plant, pleasing in color and quite ornamental.

We commence the consideration of the rose family with one of its least conspicuous members, the lady's-mantles of gardens, or al-

chemilla of botanists. The inconspicuous make-up of the entire group, as far as I know it, is probably the reason they are seldom seen in gardens. I have a notion that many gardeners who look beyond mere gaudiness would, if given the opportunity, embrace them with joy. Certainly, all would admire the beautiful foliage. The species that interests us at the moment is *A. alpina*, one of the best little plants that I know, reaching to six or eight inches tall. Its small, green flowers are of little value as ornaments, but its palmately lobed leaves, green above and silky silver below, give it a charm not often seen in garden plants. Although it gets up to 9,000 feet in the mountains of Europe, the material that I have had has been easy to grow in stony soil in sun, where it could be watered

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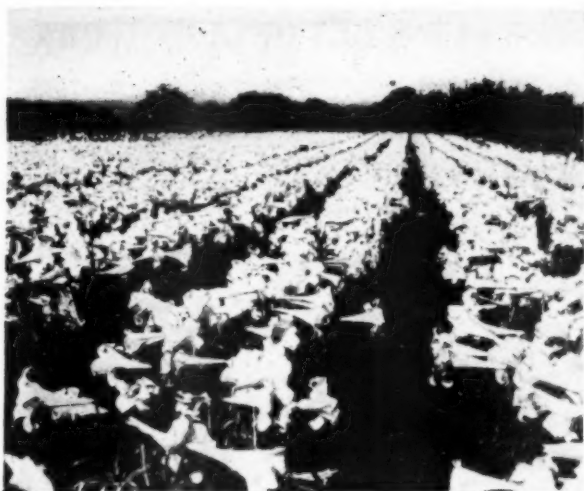
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during dry weather. It comes readily from seeds and may be divided, but I never have much success growing it from cuttings.

To choose among the score or more of alpine cinquefoils that I have grown is an almost impossible task. I think the choice would fall on *Potentilla nitida* if I could make it consistently and freely produce its lovely pink strawberry flowers. However, it is rather erratic in that respect, even when given the starvation diet which is said to induce flowering. Another choice might be the silver-leaved, yellow-flowered *P. pulvinaris*, if it were not so hard to keep in this dry garden. Because I am partial to silvery foliage, I suspect that I would choose, then, the silver of *P. nivalis* rather than the pretty white flowers of *P. clusiana*, which lacks the silver leaves of the other. In addition to its woolly foliage, *P. nivalis* has pretty white flowers in clusters on stems to ten inches in height. It seems quite amenable to garden conditions, if given perfect drainage in full sun and a little watering in dry weather.

It is said that *Geum reptans* is often heard of and seldom seen, and this may explain why gardeners are so lukewarm when one sings its praises. The fact that it is rather hard to keep in the climate of eastern

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United States may be another reason why few have made its acquaintance. I do not know that it is actually available in plants in the United States, though I sometimes see it offered. I have about reached the point, however, where I am afraid to order it, knowing that I shall likely get *G. montanum* in its place. Now *montanum* is a good thing, and I enjoy its rather small golden-yellow single rose, but when I order *G. reptans* I want to see its large (to an inch and one-half across), deep yellow flowers on long prostrate runners, clothed in deeply cleft, 3-lobed, hairy leaves. When I see that, I know that I have one of the most spectacular alpine, when size of flower is alone considered. I know, too, that I must give it a deep stony, limy soil and provide it with an abundance of moisture during the entire growing season.

For a plant that gets as high as *Dryas octopetala* does in the Alps (to 9,000 feet, we are told) it is quite amiable when we bring it to lowland gardens. Here we find it quite easy to grow in rocky soil in sun, but there seems to be some difference as to soil preference in the material available. For instance, material that I have grown from European seeds did best on limestone, while some plants I had years ago from D. M. Andrews, which had been collected in the Rockies, languished until they were moved from lime to a neutral soil. That seems to be an exception, however, for I have had plants from the west that did well on lime. In any case, it is a lovely plant when well grown, spreading its evergreen mat and producing its large white roses an inch or more across, abundantly in late spring and early summer and occasionally later in the season. Here is a plant that your customers will welcome, I am sure, especially when it is all aflutter with flowers. For *D. octopetala* you will need small pot-grown plants.

The willow herbs are generally not exciting plants, unless one of the easier ones gets loose in a moist spot, and then it can give the gardener plenty to do to keep it in check. When we get to the alpine species, these observations may also be applied, for most of them are either insignificant, unshowy things, sometimes quite ugly, or are so rampant that they cannot be admitted to decent society. All, as far as I have gone among them, require plenty of moisture, and the high alpine at least like a stony soil. It is admitted that they will ramp away to their heart's content and sometimes to the gardener's sorrow.

Of the moraines, which reach to

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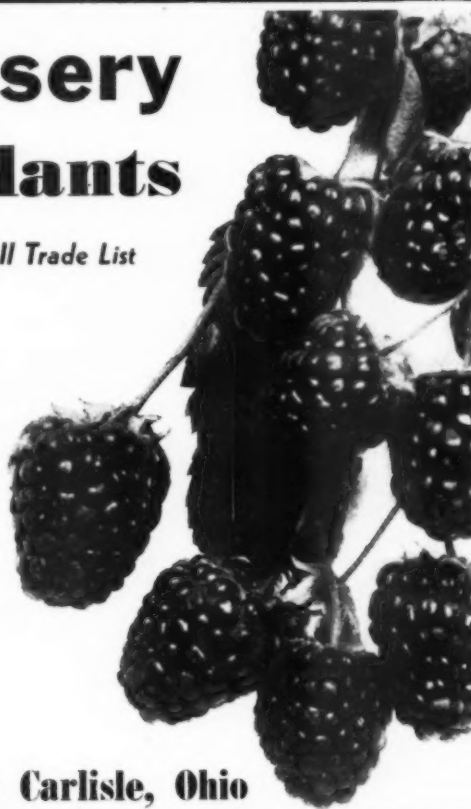
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7,000 feet in the Alps, *Epilobium fleischeri* is by far the best *epilobium* that I have grown, being both easy to grow under the conditions named before and quite handsome in summer, with its large rose-purple flowers. Our present plant is not the same as *E. dodonaei* (*E. rosmarinifolium*) as some European lists would have it, though it is, perhaps, a high alpine form of it. The latter may grow to three feet in height, while our plant never exceeded six or eight inches here. I am of the opinion that it needs a little acidity.

I hesitate to mention houseleeks, because they have been so overdone and so badly handled in some sections; yet there are few more charming plants, especially for wall decoration, be they alpine or otherwise. I have a notion that many complaints from the commercial section of plant growers about houseleeks' being poor sellers can be traced to one of two causes, commonplace kinds or poor presentation. If you have been trying to sell nondescript seedlings of *Sempervivum tectorum*, you are handling something that most gardeners have, for they have been passed back and forth over garden fences for generations. On the other hand, few gardeners know the choicer kinds, such as *S. schlehani*, especially in its

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You say you cannot sell saxifrages? Have you ever made a serious effort? The average nurseryman and the average gardener have no business trying to grow the difficult ones, such as many of the kabschia group and most of the porphyryon, including the marvelous S. oppositifolia, but there are few sections of the United States where some saxifrages cannot be grown without a lot of fuss. The safest bet for most sections will be found in the incrustated group. If you will investigate these silvered kinds, choosing two or three that appeal most to you, I am of the opinion that you will find plants attractive to your clients. I could not hope to pick out one and point to it as being the best of the lot, but I am sure that few would be disappointed if they chose S. cotyledon, whose large, silvered rosettes and candelabra of large flowers, pure white to white with red or purple spots, according to variety, on stems to eighteen inches in height, are most spectacular.

I pause only a moment at astrantia, knowing how difficult it is to get seeds of the best kind (A. major), how hard it is to germinate the seeds after they are found and how trying the plant is after one has it started along life's journey. If you are curious enough and persistent enough, you can, however, surmount all these obstacles, and then you will have one of the major experiences of your garden life, a plant which grows to two feet in height, with beautifully cleft

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TERMS: CASH. No packing charge on Lining-out Stock. Shipped via express only.

All stock State and Federal inspected. Beetle certificate furnished on request.

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For fall 1946 and spring 1947.  
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leaves and showy bracts of white and red to purple surrounding umbels of similarly colored flowers. Seeds should be planted outdoors as soon as obtainable after harvest, and the plants need damp shade.

At one time I had a passion for valerians and, after bothering correspondents throughout Europe and Asia, collected some fifty of the more than 200 kinds. When I say that few kinds, except garden heliotrope (*Valeriana officinalis*) and the Caucasian V. phu, are exciting enough to warrant a place in one's commercial operations, it is not saying much for the genus. There is at least one alpine species, V. celtica, that would, however, interest many gardeners for its fragrance alone. This is the speick, or spikenard, of the ancients, a little plant not over five or six inches tall, all of whose parts and, especially, whose roots carry a pleasing perfume, which was formerly used in the bath, as a disinfectant and as a repellent against insects. It is of little account as an ornament, the flowers being small, inconspicuous and yellow-white. V. celtica needs a moist, stony soil, either neutral or on the acid side.

**STRAWBERRY RED STELE.****Michigan Quarantine.**

Under regulation 609, effective September 1, the Michigan department of agriculture established rules and regulations on all strawberry plants, forbidding the shipment into the state of Michigan from any outside point, or from point to point within the state, of all varieties of strawberry plants except in compliance with two regulations.

The first is that at least two field inspections are to be made, the first inspection from early spring extending through blossoming season, and the second inspection in the late summer or early fall months. Each block of plants will be considered separately in determining eligibility for certification. Strawberry plants may be brought into the state of Michigan, or shipped from point to point within the state, only after they have been inspected by an official state inspector of the state in which they were grown and found to be apparently free from the so-called red stele disease.

The second regulation is that all shipments of strawberry plants must have attached thereto a copy of the certificate issued by the proper official of the state of origin attesting that the plants contained in the shipment were given the necessary two field inspections by an official state

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**Richmond, Virginia**

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1000 <i>Globe</i> , 18 to 24 ins.	\$150.00
1000 <i>Globe</i> , 24 to 30 ins.	200.00
400 <i>Globe</i> , 30 to 36 ins.	275.00
1500 <i>Pyramidal</i> , 18 to 24 ins.	125.00
800 <i>Pyramidal</i> , 24 to 30 ins.	150.00
700 <i>Pyramidal</i> , 30 to 36 ins.	225.00
700 <i>Pyramidal</i> , 3 to 4 ft.	275.00
500 <i>Pyramidal</i> , 4 to 5 ft.	350.00
300 <i>Pyramidal</i> , 5 to 6 ft. and up	
2000 <i>Dark American</i> , 18 to 24 ins.	125.00
1200 <i>Dark American</i> , 2 to 2 1/2 ft.	150.00
500 <i>Dark American</i> , 2 1/2 to 3 ft.	200.00
1500 <i>Dark American</i> , 3 to 4 ft.	300.00
800 <i>Dark American</i> , 4 to 5 ft.	350.00

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1000 <i>Irish</i> , 18 to 24 ins.	100.00
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500 <i>Irish</i> , 3 to 4 ft.	165.00
1200 <i>Irish</i> , 4 to 5 ft.	225.00
2500 <i>Irish</i> , 5 to 6 ft.	275.00
800 <i>Irish</i> , 6 to 7 ft.	350.00
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700 <i>Ashfordi</i> , 4 to 5 ft.	225.00
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800 <i>Swedish</i> , 3 to 4 ft.	200.00
800 <i>Swedish</i> , 4 to 5 ft.	275.00
200 <i>Swedish</i> , 5 to 6 ft.	350.00
1000 <i>Sabina</i> , 18 to 24 ins.	150.00
500 <i>Sabina</i> , 2 to 2 1/2 ft.	185.00
1100 <i>Sabina</i> , 2 1/2 to 3 ft.	225.00
1100 <i>Sabina</i> , 3 to 3 1/2 ft.	300.00
200 <i>Stricta</i> , 18 to 24 ins.	175.00
200 <i>Stricta</i> , 2 to 2 1/2 ft.	225.00
200 <i>Stricta</i> , 2 1/2 to 3 ft.	250.00
600 <i>Stricta</i> , 3 to 4 ft.	325.00
700 <i>Stricta</i> , 4 to 5 ft. and up.	
200 <i>Oblong</i> , 2 to 3 ft.	200.00
100 <i>Oblong</i> , 3 to 4 ft.	250.00
400 <i>Tamarix</i> , 18 to 24 ins.	225.00
100 <i>Tamarix</i> , 2 to 3 ft.	300.00
300 <i>English</i> , 18 to 24 ins.	125.00
150 <i>English</i> , 3 to 4 ft.	150.00
150 <i>English</i> , 4 to 5 ft.	200.00
300 <i>English</i> , 6 to 7 ft.	325.00
1200 <i>Pfitzers</i> , 18 to 24 ins.	200.00
800 <i>Pfitzers</i> , 24 to 30 ins.	250.00
800 <i>Pfitzers</i> , 30 to 36 ins.	300.00
1500 <i>Pfitzers</i> , 36 to 42 ins.	350.00

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DIAL 6-4321



inspector and found to be apparently free of red stele disease. The state department of agriculture reserves the right to return to the point of origin any strawberry plants received in the state of Michigan without such certificate.

#### Plant Board Recommendations.

Red stele, a fungus root rot disease, is at present the most serious disease threatening strawberries. As early as 1940 Michigan instituted the double inspection of strawberry plants, following the lead of New Jersey. Records in Michigan indicate that it has been highly beneficial in keeping the disease to the minimum and, in fact, eliminating the disease in certain areas where it was found as early as the year of 1937, according to C. A. Boyer, chief of the bureau of plant industry.

This disease has been given special attention at the meeting of the Central Plant Board the past two years, and at its meeting last March the board adopted recommendations for uniform inspection. Late summer or early fall was indicated as the time to inspect, while in localities where red stele is a problem an additional inspection prior to digging was indicated as advisable.

As to method of inspection, the recommendation was that plants from all parts of the field should be dug and examined for root or crown infestations or symptoms of disease. Special attention should be given to mother plants to determine the presence of crown borer in lightly infested fields. A row-by-row or criss-cross inspection should be made to determine the existence or extent of aboveground infestations or infections.

As to requirements for certification, it was recommended that no field strawberry plants should be eligible for certification if any of the known virus diseases such as strawberry crimp are found. Red stele or Blakemore yellows, when found under conditions which would leave no doubt as to the identity of disorder, would disqualify the planting for certification. The presence of single plants showing symptoms of disease or disorder which cannot be identified positively should not be considered cause for failure to qualify for certification. An established infestation of strawberry crown borer should disqualify a planting for certification. The finding of a single crown which has been injured by some boring insect should not be considered as an established infestation. Heavy infestations of strawberry root louse or strawberry leaf

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800 Racemiflora	7.00
700 Simonsi	7.00
150 Watereri (grafts)	12.00



roller may be reason for disqualification, but only if evidence that the vitality of the plants has been noticeably affected.

The board voted unanimously in favor of the recommendations, including the dual inspection for red stele, one inspection in the blossoming season and the second in the late summer or early fall months. It was not considered necessary to supply a special certificate for red stele, but to indicate the recommended inspections on the regular certificate in case a nurseryman grew strawberry plants.

#### BROOKDALE-KINGSWAY ADDS BUILDINGS.

The Brookdale-Kingsway, Ltd., Bowmanville, Ont., has just completed a new storage cellar, 30x105 feet, of cinder block construction, using an 18-inch foundation, on which are placed a 12-inch block and, on the inside, a 4-inch block, leaving a 2-inch air space. The outside of the wall is plastered with waterproof cement, and the inside is also plastered. Provision is made for both natural ventilation through the roof and forced ventilation by means of an electric suction fan. The ceiling is completely insulated. This increases the storage space at the nursery to somewhat over 7,500 square feet. This type of cinder block construction is supposed to be frostproof up to 35 degrees below zero. What it will do beyond that, the designers do not know, because it has not been tested at more than 35 degrees below zero.

Norman J. Scott, manager, reports also the erection of an additional propagating greenhouse, 10x100 feet. This construction is unique in the fact that all sash bars have been rabbeted to carry a second glass—that is, the whole house is all double-glassed. The firm has had such good success in putting ordinary sash on one of the present propagating houses that it was concluded that double glass would be the solution to the heating problem. This house will be controlled, as are the other houses, by motorized valves from the central boiler; by this means the temperature can be controlled, insofar as artificial heat is concerned, within 3 degrees at all times. Motorized valves are being used extensively in that part of Ontario. These valves relieve the greenhouse man of all responsibility of heat regulation, since all that is necessary is to set the air-stat, which controls the valve at all times. The additional house brings the area of glass owned by the nursery to somewhat over 15,000 square feet.

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	In Lots of	
	5 to 24	25 to 100
<i>Cuspidata</i> , 18 to 24 ins.....	\$3.50	\$3.25
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<i>Hicksi</i> , 3 to 3½ ft.....	4.50	4.25
<i>Cuspidata nana</i> , 18 to 24 ins.....	4.50	4.25
<i>Repandens</i> , 18 to 24 ins.....	4.00	3.75
<i>Repandens</i> , 2 to 2½ ft.....	5.00	...

## JUNIPER

<i>Canariensis</i> , <i>Keteleeri</i> , <i>Glaucia</i> and <i>Cupressifolia</i> (green), 3½ to 4 ft.....	4.75	4.50
<i>Canariensis</i> , <i>Keteleeri</i> , <i>Glaucia</i> and <i>Cupressifolia</i> (green), 4 to 5 ft.....	5.50	5.25
<i>Canariensis</i> , <i>Keteleeri</i> , <i>Glaucia</i> and <i>Cupressifolia</i> (green), 5 to 6 ft.....	6.50	6.25
<i>Depressa plumosa</i> , 18 to 24 ins.....	2.25	2.00
<i>Depressa plumosa</i> , 2 to 2½ ft.....	2.75	2.50
<i>Pfitzeriana</i> , 2½ to 3 ft.....	4.25	4.00
<i>Pfitzeriana compacta</i> , 18 to 24 ins.....	2.50	2.25
<i>Virginiana</i> , 5 to 6 ft.....	4.50	...

## EUONYMUS

<i>Patens</i> , 18 to 24 ins.....	2.00	1.75
<i>Patens</i> , 2 to 2½ ft.....	2.50	2.25
<i>Vegetus</i> , 18 to 24 ins.....	2.25	2.00
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# New Books and Bulletins

## CAMELLIAS IN AMERICA.

Now that the camellia has regained the popularity which it enjoyed in this country in the first half of the preceding century, its literature again has become important, and "Camellias in America," by Dr. H. Harold Hume, just published by the J. Horace McFarland Co., at \$25.50, is a volume worthy of this flower.

Announced as the result of thirty years of research, observation and personal experience, the book bears every evidence of long and devoted attention to the camellia. Part I is a historical account of the plant, how it was carried from Asia and Europe, how it came to America and how it flourished here. The brief biographical notes on the early florists, nurserymen and amateur growers whose names became associated with the camellia compose a chapter of American horticultural history interesting in itself.

Part II presents botanical data with reference to the camellia and its relatives, including a chapter on breeding. Part III covers cultural aspects in greenhouse and garden, for flowers and landscape use.

Part IV is considerably the largest section of the book, devoted to varieties, their proper description and nomenclature. Fifty pages are given to descriptions of important varieties. While the author leaves for the future the task of determining synonyms and ascertaining origins, his descriptions are the result of painstaking research already made.

The foregoing summary does not convey the handsome style in which this work is presented. The volume contains 466 pages, 7½x10½ inches, in a handsome binding, the text printed in large type on enamel paper. The illustrations are noteworthy, forty-nine being full-color plates and forty-one black and white plates, in addition to numerous sketches.

The author is well known for his contributions to horticulture in the south. The provost and dean of the college of agriculture of the University of Florida, he was recently elected president of the American Camellia Society.

## SOILS BOOK REVISION.

Recently-developed soil testing methods and the recognition of the importance of soil granulation, soil aeration and organic matter to drainage, nutrient supply and water intake

have so changed the outlook of experts on soils and fertilizers that Alex Laurie and D. C. Kiplinger have issued "Soils and Fertilizers for Greenhouse and Garden," a revision of a book originally published in 1939 as "Fertilizers for Greenhouse and Garden Crops," with J. B. Edmonds collaborating with Mr. Laurie.

In keeping with these recent developments, more space in this revision is devoted to the requirements of soils, with entire chapters giving scientific explanations of soil aeration, water supply, nutrient supply and sterilization. The book is written simply enough so that the less-experienced commercial grower can profit from its analyses and recommendations. As great variation exists in soils from such standpoints as structure, texture, mineral elements and organic matter, a thorough study of local soils and conditions is important. Nevertheless, the grower will be able to base his local soil and fertilizer re-

quirements on the general recommendations made in this book.

Information in tabular form is used throughout to supplement the text. Thus, in the chapter on cover crops and composts, a table of selected useful green manure crops, based on Ohio conditions, is given, and a table giving the soil requirements of pot plants is included in the chapter which recommends soils for specific crops.

The book is competently illustrated with diagrams and pictures of apparatus for testing and conditioning soils. An exceptional number of illustrations in the section on nutrient deficiencies graphically demonstrates the comparative results obtained when plants are insufficiently nourished and when the proper fertilizers have been added to native soils.

## ENGAGEMENT BOOK.

For 1947 "The Garden Calendar," by Helen Van Pelt Wilson, features sixty handsome pictures of the love-

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liest and most interesting gardens in the country opposite left-hand pages on which to record engagements for the morning, afternoon and evening of each day of the week throughout the year. Adding charm to this booklet are the quotations about gardens and nature from the works of well known poets and authors. The 124 pages with illustrated cover are held together with plastic loose-leaf binding.

## HILL'S PLATE BOOK.

The D. Hill Nursery Co., Dundee, Ill., has issued a new edition of the "Plate Book of Hill's Evergreens," which contains sixty color plates of forty-seven varieties of evergreens. These varieties, which are among the most popular and widely planted forms, belong to nine different genera.

The 24-page booklet, bound with a stiff cardboard cover, is printed in full colors on heavy coated paper. The booklet is an excellent guide for nurserymen's customers in identifying evergreen varieties. Pictures of landscape plantings give suggestions on their use, and two pages are devoted to sketches depicting ways of landscaping such areas as entrances, factory grounds, golf courses and drives, with evergreens.

## PLANT DISEASE MANUAL.

"Diseases of Ornamental Plants" is a new manual published by the Colorado Agricultural and Mechanical College, Fort Collins, Colo. Written by Junius L. Forsberg, now with the Illinois Natural History Survey and formerly assistant plant pathologist in the botany department at the Colorado college, this manual deals with fungicides and soil sterilization, as well as the cause, symptoms and control of diseases of over fifty specific plants, chiefly annuals in the garden and greenhouse. A half-dozen shrubs are included.

Reproductions of 106 photographs illustrate the plants as they appear when infected by the various diseases. The 172-page manual brings together information regarding the control measures of diseases which had been published previously in widely scattered journals usually not available to growers.

Distribution of the publication is being handled by Dr. L. W. Durrell, head of the department of botany and plant pathology, Colorado A. and M. College. Copies are being sent free, on request, to residents of Colorado. Any person living outside the state may purchase a copy for 50 cents.

## EVERGREENS SPECIMEN STOCK

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Chinensis femina, 4 to 5 ft.	400.00
Excelsa stricta, 3 to 4 ft.	400.00
Excelsa stricta, 2 1/2 to 3 ft.	300.00
Excelsa stricta, 2 to 2 1/2 ft.	240.00
Hibernica, 5 to 6 ft.	250.00
Hibernica, 4 to 5 ft.	215.00
Hibernica, 3 to 4 ft.	185.00
Japonica, 3 1/2 to 4 ft.	375.00
Japonica, 3 to 3 1/2 ft.	325.00
Japonica, 2 1/2 to 3 ft.	275.00
Scopulorum, Chandler's, 5 to 6 ft.	550.00
Scopulorum, Chandler's, 4 to 5 ft.	450.00
Tamariscifolia, 2 1/2 to 3 ft.	325.00
Tamariscifolia, 2 to 2 1/2 ft.	275.00
Virginalis, dark green, 4 to 5 ft.	500.00
Virginalis, dark green, 3 1/2 to 4 ft.	400.00
Virginalis, dark green, 3 to 3 1/2 ft.	325.00
Virginalis, dark green, 2 1/2 to 3 ft.	275.00
Virginalis, light green, 3 to 3 1/2 ft.	325.00
Virginalis, light green, 2 1/2 to 3 ft.	275.00
Virginiana, Blue Rapids, 6 to 7 ft.	700.00
Virginiana, Blue Rapids, 5 to 6 ft.	550.00
Virginiana, Blue Rapids, 4 to 5 ft.	450.00

## THUJA

Orientalis, 5 to 6 ft.	300.00
Orientalis, 4 to 5 ft.	250.00
Orientalis, 3 to 4 ft.	200.00
Excelsa, 5 to 6 ft.	350.00
Excelsa, 4 to 5 ft.	300.00

Send for Complete List.

## WILLIS NURSERY CO.

Ottawa, Kansas

## 60,000 TAXUS

Pots, transplants and rooted cuttings.  
2500 J. Fötteriana  
2 to 3 ft. and 3 to 4 ft.  
To trucks F.O.B. our nurseries.

**HUMPHREYS LANDSCAPE SERVICE**  
Mt. Sterling, Ky.

## LINING-OUT EVERGREENS and AZALEAS

Sturdy Plants.

**DUNLAP NURSERIES**  
Knoxville 16, Tenn.

## BUXUS SEMP. WELLER

(Weller's Hardy Northern Type)  
Only Boxwood proved hardy in Northern States for Twenty Years.

Ask for our Perennial catalog.  
**WELLER NURSERIES CO., Inc.**  
Leading Perennial Growers  
Holland, Mich.



## PLUM PITs

2,000 pounds washed and floated **Wild Plum Pits**; no bad ones. **80c** per pound.

**Sugar Maple** in lots of 100 or carload lots, 6 to 8 ft., 8 to 10 ft. and 10 to 12 ft. Write for prices.

**CASHMAN NURSERIES, INC.**  
Owatonna, Minn.

## CHRISTMAS TREES

2000 **Norway and White Spruce**  
2 to 6 ft., spaced 5 ft. apart.  
Truck or car loads only.  
Cut or Dig yourself, **75c** each.

**ANDERSEN'S  
EVERGREEN NURSERIES**  
Scottville, Mich.

**Boyd**  
NURSERY COMPANY

McMinnville' Tenn.  
**ORNAMENTAL SHRUBS  
SHADE TREES, VINES  
FOREST TREE SEEDLINGS  
LINING-OUT STOCKS**

## TAXUS

*Taxus Wellesleyana*

A compact upright grower.  
400 12 to 14 ins., xxx (bushy) B&B **\$3.25**  
400 15 to 18 ins., xxx, B&B. .... **3.75**  
Boxing at cost. Samples, at above prices  
plus **50c** each for packing.

**LUCKHARD'S NURSERIES**  
Sebewaing, Mich.

## THE NURSERY MANUAL

By L. H. Bailey

Describes methods of propagation  
and lists plants with practice for each.

470 pages.

Price, **\$3.50**

**AMERICAN NURSERYMAN**  
343 So. Dearborn St. Chicago 4, Ill.

## WYMAN HEDGE ARTICLE.

A comprehensive listing of plant materials which may be used for hedges in North American climates is included in an article entitled "Hedges for North America," by Donald Wyman, of the Arnold Arboretum, appearing in the July issue of the National Horticultural Magazine. Types of hedges which are suited for various purposes are indicated in the listing, which characterizes the plant materials as to appearance, flowers and fruits and adaptability for special purposes. The article, which gives information on planting, spacing, care and pruning, is profusely illustrated with pictures of hedge plantings in the United States and Canada.

## CLIPPED HEDGE CHART.

A 4-page chart which lists features of materials for clipped hedges and rates them according to their performances in the hedge trials at Morton Arboretum, Lisle, Ill., is included in the September-October issue of the arboretum's bulletin of popular information. Over seventy-five of the 150 trimmed hedges growing in the arboretum's demonstration planting hedge garden are considered in the chart, which divides the materials into evergreen and deciduous, and dwarf, low, medium-size and tall hedges. In the text accompanying the chart, some consideration is given to preliminary soil preparation, planting procedure and cultivation. Because experience has proved that the most satisfactory hedges are those which are widest at the bottom, with the sides tapered to the top, the importance of spacing, trimming and shaping to meet the needs of the various shrub materials and their uses is stressed.

## MANAGEMENT AUDIT.

The business executive who wants to make a critical survey of his company's management in the light of present-day requirements is given considerable assistance by the report, "Outline for a Management Audit," recently issued by the policyholders' service bureau of the Metropolitan Life Insurance Co.

Progressive companies have always made periodic audits of their accounts and inventories of their physical assets, but most executives have difficulty in obtaining an objective viewpoint when they attempt the same sort of stocktaking of the intangible assets represented by the quality of management. The report is designed to help overcome that difficulty.

Essentially a check list for use in making an audit of management, the

## TAXUS LINING-OUT STOCK

1 and 2-year pots  
Many Varieties.

**Juniper pfitzeriana**,  
18 to 24 ins. and up  
Very reasonable in lots of 100

**WYOMING NURSERIES**  
C. E. Kern  
Cincinnati 15, O.

## QUALITY ROSEBUSHES

2-yr. Budded Stock

Good standard and patented varieties. Individual packing for counter trade if desired. Bundles of ten or carloads.

Write for our wholesale price list.

**M. OLIVER FLOWER FARMS**  
Box 86 Tyler, Texas

## FRUIT TREES AND SMALL FRUITS

### HARRISON BROTHERS NURSERIES

G. Hale Harrison, General Manager  
BERLIN, MARYLAND

## TO NURSERYMEN AT WHOLESALE

Hall's Japanese Honeysuckle, transplanted, carload lots if desired. Also lining-out stock. Several thousand **Silver Maple**, 2 to 4 ft. Write for prices. **Redbud**, **Dogwood**, **Sugar Maple**, **Magnolia Acuminata**, **Papaw**, **Moss Locust**, **Chokeberry**, **Tulip Poplar** and **American Holly** seedlings, 6 to 12 and 12 to 18 inches.

### TARLTON NURSERIES

E. J. Morton, Mgr.  
Route 7, McMinnville, Tenn.

## TSUGA CAROLINIANA

**Carolina Hemlock**, for Lining Out  
Branched trees, excellent roots, 8 to 12 ins., **\$65.00** per 1000. Packing included.  
Orders booked for fall delivery in 1000 lots only.

**THE SKIPANO NURSERY CO.,**  
Warren, Pa.

## VEGETABLE PLANT HEADQUARTERS FOR THE NATION

Onion, Cabbage, Tomato, Pepper, Sweet Potato.  
We ship direct to you or your customer.

Complete satisfaction guaranteed.

Write for complete information and prices.

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Box 195 Omaha, Texas

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Established 1875

FRUIT TREES

GINKGO

NORWAY MAPLE

SOFT MAPLE

SWEET GUM

THURLOW WILLOW

WELL GROWN EVER-  
GREENS, in variety.**WRITE US ABOUT—**

- Evergreen Liners
- Shade Trees
- Specimen Evergreens
- Flowering Shrubs
- General Assortment of Stock.

**SHERMAN NURSERY CO.**

Charles City, Iowa

**ORNAMENTALS****TREES SHRUBS  
EVERGREENS**Wholesale growers of a  
general assortment for  
the best landscape plantings.**BRYANT'S NURSERIES**

Princeton, Illinois

**Northern-grown Stock**Send  
for  
Price  
List.**J. V. BAILEY NURSERIES**

St. Paul 6, Minn.

*Book orders early.***SPECIMEN EVERGREENS****SNEED NURSERY COMPANY**

P. O. Box 799

Oklahoma City, Okla.

report breaks management into its major divisions of personnel, production, sales and general administration and asks penetrating questions about each. The answers to these questions should reveal any fundamental policies and practices which are now obsolete or inadequate and may suggest steps to be taken to attain the degree of flexibility so necessary in rapidly changing conditions.

A copy of this report is available to executives who request it on their business stationery. Address: Policyholders' Service Bureau, Metropolitan Life Insurance Co., 1 Madison avenue, New York 10, N. Y.

WALTER L. WIRTH has resigned his position as superintendent of parks at New Haven, Conn., to accept the post of director of the Dr. Edmund A. Babler memorial state park, about thirty miles from St. Louis, Mo. The park is an area of about 2,400 acres, which was given to the state by Jacob L. Babler, with endowment for maintenance, and dedicated in 1938.

JOHN E. RADEBACH, JR., of Osceola Mills, Pa., employed as a nurseryman and forester by Musser Forests, Inc., of Indiana, Pa., from August, 1937 until June, 1946, except for a period of military service, is starting his own nursery for the production of forest tree planting stock and lining-out stock of species native to Pennsylvania. He expects to have stock for sale by the fall of 1947 or spring of 1948.

THREE weddings are being planned by children of John D. Siebenthaler, secretary of the Siebenthaler Co., Dayton, O. Jimmy Siebenthaler recently became engaged to Bobbie Tyler Monnier, and December weddings are planned for Betty Anne Siebenthaler and Charles Ruppert, and for Jack Siebenthaler and Ann Louise Kurtz. Jack and Ann Louise will be making long-distance plans for their wedding, since Jack is attending Cornell University, Ithaca, N. Y.

HARLAN P. KELSEY, owner of Kelsey-Highlands Nursery, East Boxford, Mass., recently visited Asheville, N. C., to inspect possible sites for an arboretum which may be established as part of the national park system along the Blue Ridge parkway. The proposed arboretum, which has received the approval of the National Park Service, would comprise 2,000 acres, either in western North Carolina or southwestern Virginia, and would contain specimens of plant life in the southern Appalachians.



Growers of a complete  
line of deciduous and  
coniferous species.

**JEWELL NURSERIES, INC.**

Lake City, Minn.

**EVERGREENS***Sheared Stock*

Available for immediate shipment.

Juniper Dundee, 4 to 5½ ft.

Juniper Keteleer, 4 to 5½ ft.

Juniper Burki, 4 to 6 ft.

Juniper Canaerti, 3 to 4 ft.

We invite your inspection of  
these plants if interested. Write  
us for prices.

**PAUL ARTERBURN NURSERY**

P.O. Box 72 St. Matthews, Ky.

**PIN OAKS** in all sizes up to  
5-inch caliper.

**SPECIMEN CEDARS** up to 10  
feet in height.

**AUSTRIAN and WESTERN  
YELLOW PINES** in 6 to 8 and 8  
to 10-foot grades.

General assortment of **Shrubs**  
in heavy 3 to 4 and 4 to 5-foot  
grades.

**PRAIRIE GARDENS NURSERY CO.**

McPherson, Kan.

Wholesale growers of  
**SMALL FRUIT PLANTS**

Grapes, Currants and Raspberries—  
our specialty.

Hydrangea P. G.

**FOSTER NURSERY CO., INC.**

69 Orchard St.

Fredonia, N. Y.



## CALIFORNIA ASSOCIATION OF NURSERYMEN

JACK LINCKE, Executive Secretary

215 West Seventh St., LOS ANGELES 14, CALIF.

### NEW ROSES DISCUSSED AT HAYWARD MEETING.

The temporary closing of the Florence restaurant, at Niles, caused a switch of the meeting place for the Central California Nurserymen's Association to Hayward for the October 10 meeting. Notices of the change were received in time, and one of the best attended meetings of the year resulted. The speakers of the evening were Clyde Stocking, rosarian, San Jose, and Clarence Perkins, of Jackson & Perkins Co., Pleasanton.

Both speakers had the same subject, "New Roses." Mr. Stocking devoted a part of the time allotted to him to explaining the methods now being used to decide whether a rose is or is not suitable for dissemination to the trade. He told of the several rose test gardens sponsored by the American Rose Society and a little of the methods of scoring the plants. A new variety, as a result of this system, must prove itself good in many parts of the country before it is recommended to the trade. Mr. Stocking called attention to the fact that such a rose, whether it was called the rose of the year or was only a runner-up, might not do well in a given location because of many factors. This was said for the benefit of the San Francisco bay area nurserymen, who have somewhat different growing conditions from those found anywhere else, and who sometimes have felt that the roses considered the better kinds by the All-America Rose Selections committee may not be too much favored by individual rose growers. This, it seems, may be especially true of the 1946 winner, Rubaiyat, which is what is known as a warm weather grower and may not be too popular in the bay area. However, Mr. Stocking insists that this is a great rose and that over the country as a whole it will be popular.

Mr. Stocking brought bouquets of some of the roses which he is sure will do well for home gardeners in the bay area. Among these were Peace, the 1945 winner, which he enthused over; Fantasia, which he said is one of the really good kinds for the bay area; Charlotte Armstrong, and several floribundas, which he said as a group are becoming liked as better kinds are being put out.

For his part of the program, Mr.

Perkins showed bouquets of the better, newer kinds being increased at the Jackson & Perkins growing fields at Pleasanton and Crows Landing. He explained the relatively few he had brought by saying he was bringing only the best and those which he felt quite sure would be well known in the next two or three years. The outstanding rose of this collection was one which will not be introduced in trade channels until

### LOOK! LOOK!

HOLLY with RED BERRIES, HEMLOCK and RHODODENDRON. 12 to 23 ins. long for Christmas decorations. 12 orange crates full, \$55.00; 6 crates, \$25.00; one crate, \$5.00.

EVERGREENS, FLOWERING SHRUBS of all kinds.

Write for your list; it is waiting for you.

**Johnie McCarver & Sons**  
McMinnville, Tenn.

## VERHALEN NURSERY COMPANY

SCOTTSVILLE, TEXAS

Wholesale Growers

### FIG

New "Coldproof" fig, bears first year.

#### ROSES

No. 1 grade, Pink, Red Radiance, E. G. Hill, Snow Queen, Sunburst, Ami Quinard, Talisman, Editor McFarland.

#### PANSIES

New giants, 3 to 5-in. blooms. Plants, \$3.00 per 100; \$20.00 per 1000 post-paid.

Also Strawberry plants,  
Pecans, Persimmons

**NEW DELTA NURSERY**  
Jackson, Miss.

### We wish to purchase...

Evergreens, Fruit Trees,  
Shrubs, etc.

Send your surplus list to

**THE PONTIAC NURSERY CO.,** Romeo, Mich.

1948, at the earliest. It is called New Yorker. It is of a red color, has a luster all its own and, according to Mr. Perkins, will not blue as it matures or opens.

The newer roses recommended by one or both of the speakers for the San Francisco bay area included Red Rippance, Pinocchio, Pink-Bountiful, Saturnia, New Yorker, Enchantress, Goldilocks, Chatter, Peachy and Hildegard. Of these, Pink Bountiful, New Yorker and Peachy were given the highest ratings. It was reiterated by both speakers that there were, no doubt, others that were just as good as some of those mentioned

### UNDERSTOCKS FOR GRAFTING

The following seedlings of native plants are available in sizes suitable for grafting and we offer at the following prices for Fall delivery only:

	Per	Per
Acer dasycarpum, Silver	100	1000
Maple	\$3.00	\$25.00
Betula Nigra, River Birch	3.00	25.00
Carpinus Caroliniana		
Hornbeam	3.00	25.00
Fagus Americana		
Am. Beech	3.00	25.00
Fraxinus Americana		
White Ash	3.00	25.00
Ilex Opaca, Am. Holly	6.00	50.00
Juniper Virginiana		
Red Cedar	6.00	50.00
Ligustrum Ovalifolium		
California Privet		
(1-yr. Cuttings)	4.00	35.00
Magnolia Acuminata		
Cucumber Tree	7.00	60.00
Prunus Serotina		
Wild Cherry	6.00	50.00
Salix Nigra, Marsh Willow	3.00	25.00
Weigela, Pink		
(1-yr. Cuttings)	4.50	40.00

No charge for packing when cash is sent with order. C.O.D. orders must be accompanied by 25 per cent of full amount of order. Orders filled in rotation as received, and we reserve the right to refund all or any part of payment should we be unable to fill your order when received.

### HIGHWAY GARDENS

Route 3 McMinnville, Tenn.

### RUSSIAN OLIVE SEEDLINGS, 1-yr.

6 to 12 ins., 12 to 18 ins., 18 to 24 ins.,  
2 to 3 ft., 3 to 4 ft.

### CARAGANA PEA TREE SEEDLINGS

6 to 12 ins.

Write for prices.

### ROGERS WHOLESALE NURSERIES

Box 132, Winfield, Kan.

### SHRUBS

### SPECIMEN EVERGREENS

### ROSES

### LINING-OUT STOCK.

Complete assortment.

Fall 1946 list now ready.

Write for copy.

### ONARGA NURSERY CO., INC.

Onarga, Ill.



# RASPBERRY PLANTS

Chief Red—Fall 1946 delivery

Per 1000

Top grade, 1/4 inch and up. **\$45.00**

No. 1 grade, 3/16 to  
1/4 inch ..... **35.00**

No. 2 grade, 1/16 to  
3/16 inch ..... **25.00**

Delivery October 10 to December 1.

Strong, hardy, well rooted sucker plants. Machine dug. Free boxing and packing. 10 per cent discount if check comes with order, 20 per cent discount on orders of 25,000 plants of top grade or No. 1 grade. Sample sent on request. References furnished.

**THIEF RIVER FALLS NURSERIES**  
Thief River Falls, Minn.

## SMALL FRUIT PLANTS and VEGETABLE ROOTS

We grow for the wholesale trade only.

**KRIEGER'S WHOLESALE NURSERY**  
BRIDGMAN, MICH.

### WE OFFER...

## Our General Line of SMALL FRUIT PLANTS

Let us quote on your requirements.

**L. J. RAMBO'S WHOLESALE NURSERIES**  
Bridgman, Michigan

## APPLE SCIONS

Let us have your want list. We have a good supply of leading varieties.

**GOLDEN EAGLE NURSERY**  
Golden Eagle, Ill.

and that in the next few years there would be still more.

The problem just now seems to be to get the plants. Apparently all rose propagators have exerted every effort to have more plants than ever before, and while some have succeeded to a certain degree, continued increased demand and partial crop failures in some parts of the country have resulted in a shortage.

Before the meeting, a group which is interested in pinto tag certification had held a short meeting. Ray Hillebrand, of the California state department of agriculture, attended this meeting and gave some last-minute instructions on the rules for such certification. He was introduced at the regular meeting and asked to tell how a nursery could become certified. Mr. Hillebrand said the procedure is as follows: Apply to the county agricultural commissioner for such certification; have the nursery inspected by the commissioner or his deputy; clean up as directed; have the nursery reinspected, and get the tag, or clean up again and stay with it until the tag is given. The advantage of having the tag is that stock from the nursery may then be sent into any of the sixteen counties in the northern end of the state, without further inspection in the country where it is received. The pinto tag requires cleaner nurseries, as inspection and enforcement are very strict, but this is an advantage to the grower as well as to the buyer, for it results in cleaner, healthier stock and in the long run saves money by reduced losses from insects and diseases and by reduced spraying costs.

Before adjournment the president introduced several new members, as well as some old-timers who had not attended the association meetings for some time. He also announced that the name plates for individual members were not yet ready, but that it was expected they would be by the next meeting. When they arrive, it will be required that every member wear his badge at all times while at a meeting.

The next meeting will be November 14 at a place to be announced later. **W. B. B.**

### TRI-COUNTY ELECTION.

The fifty-first meeting of the Tri-County chapter of the California Association of Nurserymen was held September 27 at the Pierpont Inn, Ventura. President Walter J. Knecht called the meeting to order and asked for the introduction of guests. These included Mrs. Turnoff, Santa Barbara; Mr. and Mrs. Dun-

## CUTLER & DOWNING CO.

BENTON HARBOR, MICH.

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### Wholesale Small Fruits

<b>Reds</b>	<b>Blacks</b>
Latham	Cumberland
St. Regis	New Logan

•

### Dewberries

•

### Blackberries

Eldorado	Blowers	Alfred
----------	---------	--------

•

### Currants

•

### Boysenberries

Thorny	Thornless
--------	-----------

**We suggest early orders.**

★

## CUTLER & DOWNING CO.

RED LAKE CURRANTS  
RED RASPBERRIES  
Hansen's BUSH CHERRY  
PARADISE ASPARAGUS

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**ANDREWS NURSERY CO.**  
FARIBAULT, MINN.

## Maloney's

Offer for Fall and Spring delivery 2-year Standard Apple, Sweet and Sour Cherry and Standard Pear. Also 2-year Shrubs, bushy, well rooted, twice transplanted. Write for wholesale circular.



**MALONEY BROS. NURSERY CO., INC.**  
Dansville, New York

## RHUBARB

Chipman's Canada Red  
25,000 No. 1. divisions

**BASS NURSERY**  
Chadron, Neb.

**25,000**

Peach trees in leading varieties.

**20,000**

1 and 2-year-old Apple in leading varieties.

★ ★

A general line of Shade Trees, Evergreens and Shrubs. We are still booking orders for Apple and Pear grafts for Spring shipment.

**EGYPTIAN**

Nursery and Landscape Co.

Farina, Ill. Phone 64

**FRUIT TREES**

APPLE, 1 and 2-yr.

Ornamental Shrubs,  
1 and 2-year.

Native tree seedlings.

Lining-out stock.

Write for prices.

**SANDERS NURSERY**Rte. No. 5  
McMinnville, Tenn.**MACDONALD  
RHUBARB**

Strong Divisions

\$25.00 per 100.

\$300.00 per 1000.

**WILLIS NURSERY COMPANY**Progressive Nurserymen  
Ottawa, Kan.**STRAWBERRY PLANTS**

Twenty varieties.

Let me ship **STRAWBERRY PLANTS** direct to your customers. Write for details.

**ANNA STRAWBERRY NURSERY**F. G. Anderson, Prop.  
Anna, Ill.

ham, Santa Paula, and Mr. Conner, Oxnard.

W. D. Hurst, Santa Barbara, was unanimously accepted as a member by the chapter.

C. Mavro Warren, who represented the Tri-County chapter at the annual convention of the California Association of Nurserymen, told of his activities there. Mrs. Warren and Bert Kallmann, who also attended, supplemented Mr. Warren's report.

Mr. Knecht asked if the local members would be interested in contributing material to the Ventura county fair, October 9 to 15. Because of the shortage of labor, it was decided that a Tri-County chapter exhibit would not be shown this year.

Secretary Karl W. Opitz was instructed to cast a unanimous ballot for C. Mavro Warren, president; Jack L. Hume, vice-president, and Lee T. Clearwater, secretary-treasurer, for the coming year. Retiring President Knecht installed the new officers, and President Warren took over the remainder of the meeting. Mr. Knecht was chosen state director and Mr. Steelman, alternate director, of the chapter for the coming year.

After the adjournment of the business meeting, most of the members remained to enjoy some folk dances directed by Mrs. Verhelle and Mrs. Turnoff. Karl W. Opitz, Sec'y.

**SAN FERNANDO OFFICERS.**

At a meeting of the San Fernando Valley Nurserymen's Association held September 11 at North Hollywood, Cal., the following officers were chosen: President, William Powell; vice-president, Ted Beach, and secretary-treasurer, Paul Lombard, an associate member.

Members elected to the board of directors include Henry Carter, Carter's San Fernando Nursery, San Fernando; Verne McIntyre, Toluca Lake Nursery, Burbank; Mrs. Bernice Schneider, Ed's Nursery, North Hollywood; Eric Regan, Green Arrow Nursery, Van Nuys, and Kenneth Davis, Davis Gardens, Van Nuys.

Jack Lincke, executive secretary of the California Association of Nurserymen, spoke at the meeting. The members were entertained with a group of Irish folk songs prepared by Ralph E. Dailey, of Dailey's Nursery, San Gabriel.

**WASHINGTON CHAPTER  
MEETS.**

Twenty-four members were present at a meeting of the Washington state chapter of the American Asso-

**NURSERYMEN**

Buy your 2-yr. Apple now. 5 per cent discount for cash with order, or 25 per cent down and balance C.O.D.

Per 100

5 to 6 ft., well branched. \$40.00

4 to 5 ft., well branched. 30.00

3 to 4 ft., mostly branched 22.00

2 to 3 ft., mostly branched 18.00

Varieties: Yellow Del., Red Del., Grimes, King David, Black Twig, Stayman, Trans., Maiden Blush and Ada Red. Write for prices on all other kinds of nursery stock.

**ROLLERS WHOLESALE NURSERY**

Rogers, Ark.

**PEACH STILL  
AVAILABLE**

We still have a few thousand Peach in Elberta, Red Haven, Hale Haven, J. H. Hale, Ea. Elberta, Ea. Hiley and Golden Jubilee. A few thousand One-year Apple. Write for our wholesale list.

**GROW CONTRACTS**

We are still accepting contracts for 1947 delivery: June-budded Peach, Plum, Apricots. Combination Peach, Plum, Apricots and Apple, also One-year Peach, Plum and Apricots, for 1948 delivery.

**J. C. SISK NURSERY CO.**

Winchester, Tenn.

**STRAWBERRY PLANTS**

Large supply of strong low-grown plants. Prompt service.

EVERBEARING VARIETIES. Per 1000

Streamliner ..... \$25.00

Brunes Marvel ..... 15.00

Gem ..... 12.00

Evermore (Minn. 1166) ..... 16.00

Gemzeta ..... 25.00

STANDARD VARIETIES.

Robinson, Dunlap and Blakemore. 8.00

**DOLLAR NURSERY, Bloomfield, Ia.****BLUEBERRY PLANTS**

are our specialty  
**1, 2 and 3-yr.-old**  
Special prices in  
Wholesale Lots for  
Fall Delivery

Write for prices to the

**AIRLINE BLUEBERRY FARM**606 Butterfield Drive  
EAST LANSING, MICH.

ciation of Nurserymen, held at Seattle September 13. Plans were made to hold four meetings each year, two of which will be held east of the mountains this year, one at Spokane and the other either at Wenatchee or Yakima. The other two meetings will be held west of the mountains, one at Seattle and the other probably at Vancouver. Richard P. White, executive secretary of the A. A. N., spoke to the group. As the state is now entitled to two delegates to the 1947 convention of the A. A. N., Ray Beam, of the May Nursery Co., Yakima, was elected the second chapter delegate.

President O. R. Adams, of Richmond Nurseries, Richmond Beach, appointed a committee to arrange for regional meetings in the state. Members appointed are Ray Beam, chairman, Yakima; L. N. Roberson, Seattle; R. R. Williams, Tacoma, and R. E. Tindall, Bothell, the last named secretary of the chapter.

#### OLD NURSERY UPROOTED.

The Western Nursery, San Francisco, Cal., which for sixty years was a semitropical garden on Greenwich street, is to be uprooted to make way for apartments and homes. Founded by Charles Abraham in 1886, the nursery has been allowed to decay since the death last year of Louis Hechinger, who had succeeded Mr. Abraham, his uncle, in the operation of the nursery.

Charles Abraham was instrumental in introducing many rare plants to San Francisco residents and contributed several unusual specimens to the arboretum at Golden Gate park. In his nursery were first grown the yucca from Mexico, a pine from the Canary islands, the feijoa from South America and the rata from New Zealand.

#### CALIFORNIA NOTES.

Jack McDonnell, Oakland, is recovering from an appendectomy. He had been active as general chairman of the California Nurserymen's Association convention during the last of September and had gone to the Claremont hotel, a day or two after the meeting, to settle up the association's accounts. While doing so he had an attack and was operated on immediately. For a time his condition was serious, but he is now home again and is making a fast recovery.

John Edwards, bay area camellia grower, has completed arrangements for the leasing of three acres of land near Palo Alto for his growing area. The new location will make it pos-

## STRAWBERRIES — CANEBERRIES

To the wholesale trade we offer the following varieties of small fruit plants for delivery after October 15. All prices F.O.B. shipping point.

### STRAWBERRIES

STANDARD VARIETIES	Per 100	Per 250	Per 1000
Blakemore, Dunlap, Aroma.....	\$1.25	\$ 2.50	\$ 7.50
Klondike, Missionary .....	1.40	2.75	8.50
Klonmore, Premier, Fairfax, Catskill.....	1.50	3.00	9.50
Tennessee Supreme, Tennessee Shipper.....	1.60	3.10	10.00

### EVERBEARING VARIETIES

Progressive .....	1.75	3.40	12.00
Gem, Mastodon, Evermore.....	2.50	5.50	17.00
Gemzeta .....	4.00	9.00	25.00
Streamliner .....	6.50	12.00	40.00

### CANEBERRIES

Youngberry .....	6.00	14.00	50.00
Regular Boysenberry .....	6.50	15.00	55.00
Thornless Boysenberry .....	7.50	16.00	60.00

Cold storage available for late spring orders.

Packing-out service available direct to your customers under your tags. No charge made for packing or packages.

## LEAMON STRAWBERRY NURSERY

Route 1

Ooltewah, Tenn.

Located in the highlands of east Tennessee.

Mention The American Nurseryman when you write.

## APPLE and PEAR SEEDLINGS

TWO-YEAR APPLE TREES

ONE-YEAR PEACH TREES

**L. R. TAYLOR & SONS, Topeka, Kan.**

Mention The American Nurseryman when you write.

## 1946 • SPRING • 1947

Send us your want list.

Apple, Peach, Plum, Apricot,  
Grapes, June-bud Peach.

Shade Trees and Ornamentals.

**Commercial Nursery Co.**  
DECHERD, TENN.

1-yr. Concord and Niagara Grapevines  
1-yr. Peach  
2-yr. Barberry Thunbergii  
Shade Trees  
Flowering Crab  
White Dogwood  
Purple Plum  
Red-flowering Peach

**WILLOWBEND NURSERY**

Davis Road

Perry, O.

## To The Wholesale Trade

We have the following items to offer:

Apple, 1 and 2-year-old  
June-budded Peach  
Peach, 2-year  
Pear, 1 and 2-year-old  
Plums, Apricots and Cherries

We welcome inquiries, and let us furnish your needs.

**FRAZIER NURSERY CO.**

Box 1

Smithville, Tenn.

## RED RHUBARB

	Per 100
MCDONALD .....	\$20.00
CANADA RED .....	40.00

All good size, No. 1 divisions, Cash with order—packing free. Write for prices on larger quantities.

**KEELER'S GARDENS**

Sioux Falls, So. Dak.



sible for him to have all of his operations in one location and allow for further expansion.

James Clarke, W. B. Clarke & Co., San Jose, has been active in local Community Chest work.

Mountain View Nursery is completing a storage building, 30x60 feet.

Dr. E. R. Scott, of Associated Seed Growers, Inc., who is in charge of the plant-breeding and test station at Milpitas, attended an annual conference of the organization's plant breeders at its home office, at New Haven, Conn. One of the more outstanding developments at the Milpitas branch has been a stringless bean of excellent quality, which is disease-resistant, a heavy producer and easy to ship.

The San Mateo county flower show and fiesta was better attended than ever before. Interest in the agricultural exhibits, however, was disappointing to many of the commercial exhibitors who attend such shows and who sell from their exhibits. A committee was formed by this group to meet with the fair board and arrange, before another show, for conditions which would make attendance by these men profitable. Nurserymen who exhibited felt that the interest in plants and plantings was high and that they were well rewarded by the show. Most of the nurserymen who attended or exhibited have already made reservations for space for next year. The show is an annual affair.

Bay area nursery firms which won first prizes at the San Mateo fiesta include: Pacific Nurseries, Colma; West Coast Nursery Co., Palo Alto; Peters & Wilson Nursery, Millbrae; Espalier Center, Belmont; H. Plath & Sons, Inc., San Francisco; E. W. McLellan Co., Colma and San Francisco; Schaeffer Bros., San Jose; California Nursery Co., Niles, and Three Cities Nursery, San Mateo.

James Wilson, who had put his golf clubs away when he left the Stanford University golf team about twenty years ago, entered an open tournament and took first prize in the fourth flight at the Pebble Beach Country Club. Mr. Wilson, of Peters & Wilson Nursery, Millbrae, is a past president of the California Nurserymen's Association.

Ray Hartman, of Leonard Coates Nurseries, San Jose, is president of the Santa Clara County Fair Association.

Northern California nurserymen are already planning for the state meeting to be held at San Francisco in 1949. A fund is being raised for some real gold-rush entertainment.

According to word received from

## FRUIT TREE SEEDLINGS

As specialists in this line, with 30 years' experience, we can give you that satisfaction you wish. You know that good stock year after year doesn't just "happen." It is the result of fine, mellow ground kept to a proper state of fertility, moisture under control, both in the growing and ripening season, and intelligent and experienced care in every phase of growing, digging and packing.

Let us quote on your **apple** and **pear** needs.

### CHINESE ELM SEEDLINGS.

Another of our specialties. Our seeds were gathered from trees isolated from other types of elms.

### NORWAY MAPLE SEEDLINGS.

Supply quite limited, but quality is "tops."

C. L. freight rates to some near-by distributing point.

## WASHINGTON NURSERIES

Toppenish, Wash.

## RICH & SONS NURSERY

Offers

a general line of Nursery Stock.

Write for catalog.

Retail catalogs in color available to the trade at cost.

40-page general catalog, 30c

32-page Bulb and Rose Catalog, 25c

## RICH & SONS NURSERY

Rte. 4, Hillsboro, Ore.

## NOTICE

Limited production makes it impossible to book orders for new customers.

## HOWARD ROSE COMPANY

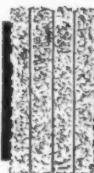
Hemet, California

## BALED SHINGLE TOW

(CEDAR SHAVINGS)

## WM. A. JOHNSTON

408 Postal Bldg., Portland 4, Ore.



## SHINGLE TOW

(Baled Cedar Shavings)

## MONARCH SHINGLE CO.

P. O. Box 37 North Portland Ore

Don Wiese, of the Superior California Nurserymen's Association, members are required to wear a flower when attending meetings of the group. Peter Cruz has been appointed a committee of one to assess a fine on members not properly adorned. The group meets at or near Sacramento the second Wednesday of

## PACIFIC COAST NURSERY

2244 N. Skidmore Ct.

Portland 11, Ore.

Pioneer seedling growers on the Pacific Coast since 1914.

Specializing in fruit tree seedlings. **Angers Rooted Quince Cuttings, Chinese Elm Seedlings, Norway Maple Seedlings and English Privet.**

We also have **Norway Maples**, 3-yr. branched, and **Norway Whips** and **E. W. Birch**, 3 yrs. old, well branched.

We aim to please with quality stock.

John Holmason & Sons, Props.

each month, and all nurserymen are invited to attend.

Walter B. Balch, of the Shell Chemical Co., San Francisco, was the speaker at the October meeting of the San Diego county nurserymen's group at San Diego. His subject was "Soil Fumigation." The following Friday, October 25, he gave a talk on the same subject to

the Pacific States Seedsmen's Association, at the Hilton hotel, Long Beach.

Clyde Stocking, San Jose, has qualified as a movie operator. After the last business meeting of the Central California Nurserymen's Association, he showed several reels of color movies he had taken. These included shots of the rose test gardens at Portland and of his trip to the American Association of Nurserymen meetings at Miami Beach. The convention trip pictures, which included some taken in Louisiana and Mississippi, gave the group an idea of gardens in other sections of the country.

W. B. B.

#### COVER ILLUSTRATION.

##### *Fagus Sylvatica Pendula.*

Few trees are more effective in their native habitat than the common American beech, *Fagus americana*. Its graceful form, light gray bark and attractive foliage have made it one of the most attractive native woodland trees. Unfortunately, the American beech does not lend itself readily to landscape planting. It grows best in rich woodland soil in groups. Many times we have seen a beechwood area cleared for house construction only to result in the gradual decline of these beautiful trees.

Somewhat more adaptable to landscape planting conditions is the European beech. It does not have the effective bark color, but in other respects, especially in foliage, it is equal or superior to the American beech. While the European beech is said to reach a height of ninety feet, forty to fifty feet is a more common size.

Its foliage is attractive, being almost entire with a slightly wavy margin and shiny dark green in color. The leaves frequently persist on the tree nearly all winter. The yellow and brown fall coloring is less effective with the European beech than it is with the American beech.

For the most part, distinctly weeping or pendulous trees do not lend themselves to promiscuous planting in the landscape picture. It is only on a few occasions that weeping trees, such as the weeping willow and the weeping European beech, can be used effectively. The weeping willow lends itself to effective use around water, while the weeping European beech is most effective when used in large open lawn or park areas. For other than planting around water, the weeping European

## PORTLAND WHOLESALE NURSERY CO.

306 S. E. 12th AVENUE Avery H. Steinmetz PORTLAND, OREGON

### Quality Stock

CONIFERS AND BROAD-LEAVED  
EVERGREENS  
SHADE AND FLOWERING TREES  
FRUIT TREE SEEDLINGS  
FRUIT TREES  
DECIDUOUS SHRUBS  
VINES AND BULBS  
PORTLAND ROSES

Very sorry, no catalog this fall.  
We still have a limited supply of  
Norway and Schwedleri Maple  
Whips, 6 to 7, 7 to 8, 8 to 9-ft. grades.  
Also Pin. Red. Scarlet Oak, 7 to 8,  
8 to 9, 9 to 10 ft.

*Write for our Catalog*

### A. MCGILL & SON

FAIRVIEW, OREGON

*Wholesale Only*

#### GOOD WESTERN-GROWN NURSERY STOCK

Fruit Tree Seedlings  
Flowering Ornamental Trees  
Shade Trees

Grown right and packed right.  
Combination carloads to Eastern  
distributing points will save you  
on freight.

### DOTY & DOERNER, Inc.

6691 S. W. Capitol Highway

Portland 1, Oregon

•  
**Wholesale Growers  
of  
General Nursery Stocks**

1 carload specimen Dwarf Boxwood  
18 and 24 ins.

Tree Hedge Box, 24 to 30 ins. and  
smaller.

100 Farnely Cotoneasters

150 English Yew, 4 to 5 ft.

150 Native Azaleas

100 Euonymus Japonica

400 Named varieties of Rhododendrons

300 Nandinas

300 Green Aucubas

Plenty of fine Camellias and other fine  
shrubs.

The above listed are all landscape size.

**F. A. DOERFLER & SONS**  
Salem, Ore.

### MILTON NURSERY CO.

MILTON - Since 1878 - OREGON

Oregon and Washington-Grown Apple  
and Pear Seedlings, Angers Quince  
Rooted Cuttings.

Chinese Elm Seedlings and Trans-  
planted Specimen Trees.

Our Sales have been Heavy, but we  
have other Items in Surplus.

Send us Your Want List. Please Use  
Your Letterhead.

Combination Carloads to Eastern distrib-  
uting points at minimum freight cost.



### SHERWOOD NURSERY CO.

EVERGREENS - Propagators & Growers  
141 S. E. 65th Ave., PORTLAND 16, ORE.

## AS ALWAYS— OREGON'S BEST SOURCE of GOOD ROSES

Limited crops reserved for  
established customers.

### PETERSON & DERING

*Wholesale Rose Growers.*  
Scappoose, Oregon

## WANT ADS

**Help and Situation Wanted  
and For Sale advertisements.**

**Display: \$2.50 per inch, each insertion.  
Lines: 20¢ line; Minimum order \$1.00.**

## HELP WANTED

Working foreman, for a midsouthern nursery and landscape firm, one who is familiar with landscape materials, can handle small crew and do planting, pruning, lawn and general landscape work from small landscape designs. Permanent and steady year-around work. Please give age, experience, references, family and minimum pay required.

Address Box 462, care of American Nurseryman.

## HELP WANTED

Propagator or young married man interested in learning to propagate stock. We can supply house to live in and want someone interested in something permanent.

FAIRVIEW  
EVERGREEN NURSERIES,  
Fairview, Pa.

## WANTED

Will invest \$5000.00 to \$10,000.00 and services in established garden shop or cash-and-carry nursery store with display ground. Now managing half-million dollar department store. Ohio, New York, Pennsylvania, Kentucky, Tennessee. Address Box 465, care of American Nurseryman.

## FOR SALE

Nursery business, wholesale and retail. The nursery is well stocked and in the best of condition. There are 232 acres in the place, and buildings are all in good condition. Reason for selling, husband passed away.

MRS. C. W. ALEXANDER  
R.H. No. 4, Boone, Ia.

**HELP WANTED**—Middle aged man, 36 to 50, to take charge of our mail-order nursery division.

This job is a good one for the right person and will pay a good salary.

Man must be familiar with ordinary mail-order nursery items, must be able to recognize good quality when shipments arrive, see that they are properly labeled, properly stored and when shipping season opens, supervise labeling, trimming, wrapping, packing and getting them on the trucks to the post office. During the summer months, we grow some hardy perennials, which would be under his supervision.

CONDON BROS. SEEDSMEN  
Rockford, Illinois

**HELP WANTED**—Looking for a young man 25 to 35 years old, who, after one year in our territory, near large eastern city, can show himself capable of taking entire charge of landscape department for established nursery. Should have a good education along horticultural lines and a friendly personality. To such a man we will pay fair salary first year, a commission on his sales the second year, thereafter percentage of profits from landscape department operations. A-1 character and other reference will be required. Address Box 464, care of American Nurseryman.

**WANTED TO BUY**—Small cash-and-carry nursery with modern residence; Ohio, Pennsylvania, Kentucky or Tennessee; or would consider substantial interest in larger operation. Address Box No. 461, care of American Nurseryman.

**SITUATION WANTED**—Position wanted with nursery or fruit farm by young woman desiring to get experience and learn the business. Has 1946 B. S. degree, with major in horticulture.

ELEANOR THOMAS, Springfield, S. Dak.

beech would be my choice of the best of the weeping trees.

The weeping European beech is rounded in outline, with wide-spreading, drooping branches that clothe the tree to the ground. It is almost impossible to grow grass under a weeping European beech, but there is little reason for having grass under such a tree, since the underbranch area is entirely screened from view. It is well to let a good litter of leaves accumulate under the branch area.

The weeping European beech is hardy and prefers a rather rich, moist but well drained soil. It is propagated by grafting during the winter months in a greenhouse. *Fagus sylvatica* is preferred as the rootstock. Varieties of the European beech have been grafted onto stocks of American beech, but my limited observation of them would lead me to believe that the European beech is much the best stock.

The weeping European beech is an attractive tree and finds its best use as a lawn specimen on large estates or in park areas. L. C. C.

## OBITUARY.

Arthur Bowman.

Arthur Bowman, president of Arthur Bowman, Inc., Portland, Ore., who was prominent in the promotion of the bulb-growing industry in the Pacific northwest, died October 6 of a heart attack. He was 74 years old. Survivors include his wife, Mrs. Rose Bowman, and a sister, Mrs. Ethyl Watson, of Welches, Ore.

Mr. Bowman went to Portland fifty-six years ago. There he was first associated with the Portland Seed Co. as an advertising assistant. He quietly helped the establishment of bulb farms and guided improvement in methods of bulb growing and distribution, in late years through the Northwest Bulb Growers' Association.

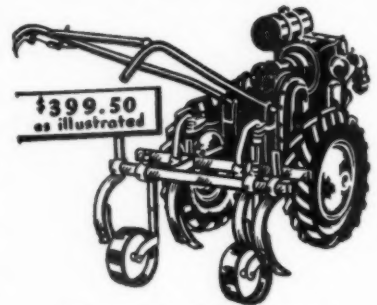
Edwin D. Pannell.

Edwin D. Pannell, owner of the North Jersey Nurseries, Millburn, N. J., died at his home September 15 following a short illness.

Mr. Pannell was born on a large farm near Egypt, N. Y., and educated at Palmyra Classical Union Academy, the University of Rochester and Poughkeepsie Business College. As bookkeeper, he was employed by Wilmot Castle Manufacturing Co. and Brown Bros. Nursery Co., at Rochester, and was later transferred to the office of the nursery firm at Toronto, Ont.

Moving to New Jersey in 1896,

## NATIONAL GARDEN TRACTOR



### EFFICIENT DEPENDABLE ECONOMICAL

- 3 H.P., 4 cycle, Wisconsin air-cooled engine.
- Plows up to 1 acre a day—seeds, cultivates and harrows up to 4 acres per day.
- Finger Tip controls for quick steering, balanced turns.
- New patented drawbar insures precision cultivation.
- Has forward and reverse speeds.
- All attachments available.

### IMMEDIATE DELIVERY.

Write or wire.

**NATIONAL FARM EQUIPMENT CO., Inc.**

Dept. N, 581 Sixth Avenue, New York 11, N. Y.

## Tree Wound Dressing

Arborist Tree Wound Dressing is a scientifically prepared waterproof composition for application to tree cavities, wounds or other exposed wood of trees. It contains no coal tar, carbolineum, creosote, nor any material injurious to the cambium layer or the life of the tree.

Arborist Tree Wound Dressing possesses antiseptic and fungicidal properties, being waterproof, adhesive and elastic, giving a durable tree wound dressing which will not harm the living tissue.

Per gal.

1 gal. can (6 in case).....\$1.00  
30 and 50-gal. drums......75

**ARBORIST SUPPLY CO., INC.**

Dept. A. N. 1

Rye, N. Y.

## "GRO-QUICK" ELECTRIC SEED BED HEATER

**BOTTOM HEAT CAN'T BE BEAT**

For Early Plant Starting  
For High Germination  
For Fast Growth  
For Rooting Cuttings



**GET ALL THE FACTS NOW**

Send today for free new instruction sheet with plans and experience reports from users in your line of business. GRO-QUICK will substantially increase your profits.

**"GRO-QUICK"** 386 W. Huron St. Chicago 10, Ill.



## Own a SOIL TEST LABORATORY Of Your Own



**\$22.50**

express paid

### SUDBURY PORTABLE SOIL TEST LABORATORY

The most valuable piece of equipment you can own, giving you the soil information that you need for efficient production. Widely used by estates, professional growers and government field stations. Will last almost a lifetime with refills. Comes in instrument type chest. No chemistry knowledge required. Complete with instructions and helpful chart. **SEND NO MONEY.** Order C.O.D. \$22.50, plus express charges (or send \$22.50 and we pay express). Money back guarantee.

Dealers Write for Special Offer.

### SUDBURY SOIL TEST LABORATORY

Box 116

So. Sudbury, Mass.

## Send for Our Seed List.

### A. B. C.

**"Supreme" Quality  
SEEDS — PLANTS — BULBS**

and

Growers' Accessories

### AMERICAN BULB CO.

1335 W. Randolph St. CHICAGO 7  
31 W. 27th St. NEW YORK 1



## TREE GUARDS PROTECT valuable young TREES from Bark-Eaters

- This chemically impregnated fibre guard snaps on quickly.
- Lengths — 24" and 30". Expands to 3½" Diameter.
- Jobbers-Dealers — write for Special Sales Proposal.

LAMINITE PRODUCTS - Canton 5, Ohio

## REDBUD TREE SEEDS

For Sale

**JOHN FISHER**  
Bazaar, Kan.

## SEEDS

Collectors of Tree, Shrub and  
Wild Flower Seeds  
Crude Drugs and Ornamentals

**E. C. MORAN** Stanford, Mont.

Mr. Pannell was with F & F Nurseries, at Kenilworth, before going to Springfield. He married Katharine Goltra, of Martinsville, in June, 1898. In 1903, Mr. Pannell bought the title of North Jersey Nurseries and established his offices at Newark. Five years later, he purchased property at 318 Main street, Millburn, from which he conducted his nursery for thirty-eight years.

Mr. Pannell served on the Millburn board of education for six years, was president of the Taxpayers' League, secretary of a draft board during World War I and a deacon for four years of the Central Baptist Church of Elizabeth, where he was a member for twenty-eight years. He was a member of the American Association of Nurserymen and of the New Jersey State Association of Nurserymen.

He is survived by his widow; three daughters, Mrs. Ellwood Marshall, Miss Lolita Pannell and Mrs. John D. Chipp, and a son, Ronald G. Pannell.

James Stewart.

James Stewart, 68, partner in the Stewart-Ross Co., landscape gardeners, Pittsburgh, Pa., died October 13 in his home, following a short illness. Mr. Stewart was born in Ayrshire, Scotland, and came to Pittsburgh forty years ago.

He was landscape gardener at the Frick estate and superintendent of the A. W. Mellon estate before he founded the Stewart-Ross Co. twenty years ago. Mr. Stewart was a member of several local societies and is survived by his widow, two daughters, two sisters, a brother and two grandchildren.

GLENWOOD GARDENS, 1400 Hamilton street, Jacksonville, Fla., will be opened December 1 by Artis L. Kent and Jack R. Bush.

THE Louisville Retail Nurserymen's Association was entertained October 9 by Louis J. Korfhage at a dinner party at his home, at Shively, Ky. Walter Hartman was accepted as a new member by the association.

RICHARD P. WHITE, executive secretary of the American Association of Nurserymen, was elected treasurer of the American Trade Association Executives at the group's twenty-seventh annual meeting, held recently at Cleveland, O.

PROF. C. J. GILGUT, secretary of the Massachusetts Nurserymen's Association and a member of the staff of Massachusetts State College field station, Waltham, was elected president of the New England Gladiolus Society at its annual meeting, October 5, at Horticultural Hall, Boston.

## GLADIOLUS BULBS

By the 100, 1000 or Million.

We grow the following:

Aladdin	Marg. Fulton
Algonquin	Marg. Beaton
Beacon	Picardy
Gardenia	Snow Princess
Bit o' Heaven	Vagabond Prince
Blaze	

We also grow many of the newer varieties, such as White Gold, Leading Lady, Buckeye Bronze and Golden Teton.

Catalog ready in December. A postal card will put your name on our mailing list.

**CUTLER & VENNARD NURSERY**  
Box 394 Sioux City, Ia.

## FOR BEST RESULTS

use the penetrating fumigant



THE DOW CHEMICAL COMPANY  
MIDLAND, MICHIGAN

## CHARLES SIZEMORE Traffic Manager

319½ Georgia St., Louisiana, Mo.

Loss and damage claims against railroad and express companies collected.

Freight bills audited.

Past due notes and accounts collected.

Well known to the nurserymen of the country.

Reference: Bank of Louisiana.

## AGAIN AVAILABLE

## PROPAGATION OF PLANTS

By

M. G. Kains and L. M. McQueston

Comprehensive and Up to Date

A complete practical guide for the grower to the working methods of plant propagation by seeds, layers, grafting and budding.

Tells the how and why of all processes.

More than 600 pictures shown in 350 plates.

640 pages—Price, \$3.50

**AMERICAN NURSERYMAN**  
343 So. Dearborn St., Chicago 4, Ill.

# CLASSIFIED ADS

Five lines, \$1.00,  
each additional line 20 cents,  
per insertion.

## BERRY PLANTS

**CULTIVATED BLUEBERRY PLANTS**—New Jersey-grown. Home of cultivated blueberries. Were originated in this state. More blueberries grown in this state than the entire U. S. Ship now until Nov. 15. One-yr. varieties: Rubel, Jersey Rancocas, Cubot, \$20.00 per 100; \$190.00 per 1000. One-yr. Dixi, Atlantic, Pioneer, Pemberton, Weymouth. Prices quoted, 2-yr., 10 to 12-in. height, \$50.00 per 100. 2-yr., 12 to 15 in., \$60.00 per 100. Varieties, 2-yr., Jersey, Burlington, Rancocas, Varieties, 3-yr., \$90.00 per 100. Concord, Jersey, Burlington, Rubel, Rancocas. Many inquiries and orders being received. Great demand. Shipping all over.

WARREN SHINN, Root Specialist,  
Woodbury, N. J.

**SMALL FRUIT PLANTS** Per 100 Per 1000  
Boysenberry (thornless) \$5.50 \$50.00  
Boysenberry (regular) 5.00 40.00  
Youngberry (regular) 4.00 30.00  
Cumberland Raspberry 4.00 30.00  
Latham Raspberry 5.00 40.00  
St. Regis Raspberry 5.00 40.00  
Blakemore Strawberry 6.00  
Aroma and Dunlap  
Strawberries 5.00  
Write for complete list.

V. P. BASHAM, Mountainburg, Ark.

Pixwell Gooseberries, 2-year, No. 1, 40c each, by 100 or 1000.  
Pixwell Gooseberries, 2-year, No. 2, 25c each, by 100 or 1000.  
Ruddy and Latham Raspberries, 2 to 1 1/2 in. and up, \$50.00 per 1000.  
New Minnesota No. 1118 strawberry, to be named this fall, \$50.00 per 1000.  
10 per cent off for cash with order.

SCHWAB FRUIT FARM & NURSERY,  
220 N. 5th St., Mankato, Minn.

## CERTIFIED RASPBERRY PLANTS

Per 100 Per 1000  
Indian Summer, No. 1 \$6.00 \$50.00  
Taylor, No. 1 6.00 50.00  
Chief, No. 1 5.00 40.00  
Chief, No. 2 3.75 27.50  
Sunrise, No. 1 4.00 40.00  
Sunrise, No. 2 3.75 27.50  
No charge for boxing.

BAKER'S NURSERIES, Hoosick Falls, N. Y.

## STRAWBERRY PLANTS

Klondike, Dunlap, Aroma, Blakemore, Missionary, 100, \$1.50; 250, \$2.75; 500, \$4.75; 1000, \$8.00.  
Tennessee Supreme, Tennessee Shipper, 100, \$1.50; 250, \$3.00; 500, \$5.25; 1000, \$8.00.  
Progressive or Gem Everbearing, 100, \$1.75; 250, \$3.50; 500, \$6.20; 1000, \$11.00.  
Shipped prepaid.

HYSSINGER NURSERIES, Cleveland, Tenn.

## CERTIFIED RASPBERRY PLANTS

Per 100 Per 1000  
Latham No. 1 \$4.50 \$40.00  
Latham No. 2 3.50 30.00  
Indian Summer No. 1 5.00 45.00  
Exceptionally clean strong stock.

Write for our new Gladiolus price list.

WHITEHALL FLORAL & NURSERY CO.  
Box 205 Whitehall, Wis.

## RASPBERRY PLANTS

Grades, extra No. 1. Sunrise Red Raspberry, cut back as per your order to any length, now growing 4 ft. high. None better anywhere. Great bargain, \$40.00 per 1000; \$5.00 per 100. Most nurseries getting \$50.00 per 1000.

WARREN SHINN,  
Woodbury, N. J.

Stocky, well rooted **STRAWBERRY PLANTS**. Aroma, Blakemore, Klondike, Dunlap, Premier, \$6.00 per 1000. Mastodon Everbearing, \$7.00 per 1000. F.O.B. McMinnville, Tenn. SAMP PACK & SONS, R.F.D. 6, Smithville, Tenn.

**BERRIES**—Strong healthy Eldorado and Lucetta Dewberry, prolific bearers of luscious fruit. No. 1, 2-yr. plants, \$3.00 per 100; \$25.00 per 1000.

MRS. CHARLIE ROBINSON, Greenville, Ga.

## BULBS

**GENUINE IMPORTED HOLLAND BULBS**. One of America's best list of the finest varieties and Novelties. All top-size bulbs. Ready for immediate shipment. Send for our free catalog, beautifully illustrated in color, with wholesale discounts.

**TULIPS, HYACINTHS, NARCISSUS, CROCUS, LILIES** and many other species of miscellaneous bulbs. All reasonably priced. Also, our wholesale list of **PERENNIALS** and **ROCK GARDEN PLANTS** is now ready. Send for your copy.

CARROLL GARDENS, Westminster, Md.

## GLADIOLI

We are now digging extraordinarily clean, plump, high-crowned bulbs for delivery November 1 and later. All of our stock was either Cerean or Lyal treated and planted in new soil. Bulblets will be field run with the large bulbets still in your order and not screened out. We have especially fine stocks of

**STOPLIGHT**, New, top-notch, brilliant, clear florists' red fine grower and cutter. Will cut fine spikes from No. 3 and No. 4 bulbs.

**WHITE GOLD**, Very large, high-quality, early blooming cream-white. In top demand in cut flower markets. Produces almost 100 per cent 31 spikes even from No. 3 and No. 4 bulbs. One of the strongest and healthiest growers.

Per 1000 Bbts.  
Nos. 1 2 3 4 5 6 qt. pk. bu.  
Stoplight \$75 \$70 \$60 \$45 \$35 \$25 \$15 \$10 \$400  
White Gold 75 60 50 40 30 15 100 375  
Add 10 per cent to above prices for the 1400 rate.

We also have splendid stocks of Algonquin, Anna Mae, Corona, E. Cave Cole, King William, Lady Jane, Oregon Gold, Crinkle Cream, Valeria and other newer cut flower kinds. Write us for complete catalog and wholesale list.

LASCH BULB FARM,  
2210 Elm St., New Albany, Ind.

## ORIENTAL PEARL

The wonder Gladiolus.  
Fine letters from all over the country and Canada say that Oriental Pearl was large and beautiful, exceeding all expectations. In Florida and California it was extra fine. Oriental Pearl is new and its great future lies ahead. Tall-growing cream, with long flower head and immense florets; fast propagator, 100 per cent germinator.

**SPIC & SPAN**

"The Greatest Name in Glads"  
4 Grand Championships—25 firsts. Many special awards in 1945-46. As seedling and new introduction establishing a new record. Also Leading Lady, Silver Wings, Van Gold, Miss Wisconsin, Marimba, Variation, White Gold, Anna Mae, Candy Heart, Lady Jane, etc. All top-notch commercials. Write for circular and prices.

COSMOPOLITAN GLAD GARDENS,  
231 W. Wisconsin Ave., Milwaukee 3, Wis.

**TULIPS**—All the best and latest novelties in many varieties. Top-size bulbs, 12 cm. and up. Ideal Darwin, Darwin, New Giant Breeder, Cottage, Single Early, Double Early, Multi-flowered, Rembrandt American Flag, Lily-flowered, Triumph, Parrot, Chameleon, Chinese Lantern and botanical.  
Send for our free catalog, beautifully illustrated in color, with wholesale discount. Free on request.

CARROLL GARDENS, Westminster, Md.

## WHOLESALE PRICES OF CANNA BULBS

\$6.00 per 100, \$50.00 per 1000  
Hungaria, tall, pink; Wyoming, yellow; King Humbert, red; Yellow King Humbert, yellow; President, red; Pennsylvania, orange and red.

BENTON COUNTY NURSERY CO.,  
Rogers, Ark.

## DOUBLE TIGER LILY BULBS

Per 100  
3 to 4-in. circumference \$6.50  
4 to 5-in. circumference 8.50  
5 to 6-in. circumference 10.00  
6 to 7-in. circumference 15.00  
THE EVERGREEN NURSERIES, Lowell, Ind.

**CANNAS**—Select stock, 200,000 President, rich scarlet, 4 ft., green foliage, carefully grown under our personal supervision, guaranteed true to name. Strong, 2 to 5-eye divisions, liberally graded, \$8.00 per 100, \$60.00 per 1000.

MRS. CHARLIE ROBINSON, Greenville, Ga.

## BLAKBERRY LILIES

(Belamcanda Chinesis)  
Rare and beautiful, rich orange blossoms, followed by berries. \$2.00 per doz. \$10.00 per 100.

MRS. CHARLIE ROBINSON, Greenville, Ga.

## CREOLE LILLIES

Improved variety, sound and clean blooming size, \$25.00 per 100; \$40.00 per bu.

MRS. CHARLIE ROBINSON, Greenville, Ga.

## EVERGREENS

**RED AND WHITE PINE**—8,000 to 10,000 Red and White Pine Trees, 2 to 4 feet in height. Buyer to select and remove from present location at Easton, Conn. Reasonably priced for early removal and sales in volume. Inquire to ECKART, R. F. D. 4, Madison Ave., Bridgeport, Conn.

## AZALEA ROOTED CUTTINGS

100,000 Formosa and some other Indian varieties available for shipment after December 1. \$6.50 per 100; \$60.00 per 1000. No charge for packing. **FLORIDA NURSERY & LANDSCAPE CO.**, P. O. Box 97, Leesburg, Fla.

200,000 BUXUS SUFRUTICOSA

Most beautiful, true, old-fashioned, dwarf, heavy, round, compact, perfect shaped top, carefully grown under our personal supervision; 8 years; 10 to 12-in. plants, \$50.00 per 100; 35c in lots of 1000 or more.

MRS. CHARLIE ROBINSON, Greenville, Ga.

# AMERICAN NURSERYMAN

Per 1000  
White Pine, 2-1, 4 to 6 ins. \$40.00  
White Pine, 2-2, 6 to 10 ins. 50.00  
White Pine, 2-3, 20 to 32 ins. 140.00  
Norway Red Pine, 2-0, 4 to 6 ins. 25.00  
Norway Red Pine, 2-1, 5 to 8 ins. 48.00  
Norway Red Pine, 2-2, 7 to 12 ins. 75.00  
Western Yellow Pine, 2-0, 4 to 6 ins. 25.00  
Western Yellow Pine, 2-3, 12 to 16 ins. 95.00  
Black Spruce, 2-2, 4 to 6 ins. 70.00  
White Spruce, 2-3, 8 to 12 ins. 100.00  
Black Spruce, 2-1, 3 to 7 ins. 45.00  
Black Spruce, 2-2, 8 to 12 ins. 80.00  
Black Hills Spruce, 2-3, 6 to 10 ins. 80.00  
Black Hills Spruce, 2-3, 10 to 14 ins. 120.00  
Black Hills Spruce, 2-3, 14 to 18 ins. 140.00  
Engelmann's Spruce, 2-2, 4 to 7 ins. 75.00  
Balsam Fir, 2-0, 2 to 4 ins. 30.00  
Balsam Fir, 2-3, 8 to 10 ins. 110.00  
Lining-Out Stock

Each Per 100  
Mugho Pine, XX, 8 to 10 ins. \$0.50 \$55.00  
Mugho Pine, XX, 10 to 12 ins. .90 85.00  
Colorado Blue Spruce, XX,  
12 to 18 ins. 2.00 195.00  
18 to 24 ins. 3.00 295.00  
Colorado Green Spruce, XX,  
12 to 18 ins. 2.00 195.00  
White Spruce, XX, 12 to 18 ins. .85 80.00  
White Spruce, XX, 18 to 24 ins. 1.10 115.00  
White Spruce, XX, 24 to 30 ins. 2.50 245.00  
Black Hills Spruce, XX,  
12 to 18 ins. .85 80.00  
18 to 24 ins. 1.50 145.00  
Platte River Juniper, XX,  
12 to 18 ins. .90 85.00  
18 to 24 ins. 1.35 130.00  
24 to 36 ins. 2.00 195.00  
Communis Juniper, XX,  
8 to 10 ins. .85 80.00  
American Arborvitae, XX,  
18 to 24 ins. .70 65.00  
Hemlock, XX, 10 to 24 ins. .55 50.00  
GIRARD BROS. NURSERY  
Geneva, Ohio

Ready for shipment fall 1946—Spring 1947.

Azaleas.

Hinodegiri, Red, funnel-shaped flowers, blooms April and May, low grower.

Per 100 Per 1000

2000 8 to 10 ins. \$9.00 \$85.00

7000 10 to 12 ins. 12.50 115.00

1000 15 to 18 ins. 21.00 185.00

Benign, Pink flower in April and May, low grower.

1500 8 to 10 ins. 9.00 85.00

1000 10 to 12 ins. 12.50 115.00

Macrantha, Tall, to 3 feet, pink flowers.

1000 10 to 12 ins. 12.50 115.00

1500 12 to 15 ins. 15.00 140.00

Amoena, Purple. Also known as Rhododendron Hatsugiri.

1500 10 to 12 ins. 12.50 115.00

1000 12 to 15 ins. 15.00 140.00

500 15 to 18 ins. 20.00 185.00

Lorraine, Pure rose-pink, semidouble, blooms late, low grower.

300 8 to 10 ins. 9.00 85.00

300 10 to 12 ins. 12.50 115.00

**HEATHER**

Mediterranean Hybrid, Dwarf, compact grower.

2500 9 to 12 ins. 7.50 70.00

3000 12 to 15 ins. 9.00 85.00

Springwood (White), Hybrid, blooms throughout winter, early spring.

2500 9 to 12 ins. 7.50 70.00

2000 12 to 15 ins. 9.00 85.00

All of the above are twice transplanted, field-grown, nice bushy plants ready for your retail trade or forcing.

**RICHMOND NURSERIES**

Richmond Beach, Wash.

## EVERGREENS

Each

Chinese Arborv., 4 to 5 ft. \$2.50

Hemlock Spruce, 30 to 35 ins. 2.50

Hill's Pyramidalia Arborv., 30 to 35 ins. 2.00

White Pine, 3 to 4 ft. 2.75

English Juniper (Communis Upright), 5 ft. 2.75

Tamariscifolia Juniper, 2 ft. 1.75

Stricta Juniper, 36 to 42 ins. 2.50

Andorra Juniper, 3 ft. 2.50

Pfizer Juniper, 24 to 30 ins. 2.00

3 to 4 ft. 3.50

French Spike Juniper, 4 to 5 ft. 2.25

Golden Juniper (spreader), 3 ft. 2.50

**BROAD-LEAVED EVERGREENS**

Lalandi Thorn, 4 to 5 ft., cut back. 2.50

Cotoneaster Francheti, 3 to 4 ft. 1.75

Cherry Laurel, 4 to 5 ft. 3.50

**SHADE TREES**

Pin Oak, 8 ft., 2-in. cal. 2.25

Willow Oaks, 8 ft., 2-in. cal. 2.25

Weeping Willow, 6 ft. 1.25

White Dogwoods, 8 to 6 ft., 2-in. cal. 2.50

Redbud trees, 6 to 7 ft. 1.25

Chinese Elm, several sizes and prices.

F.O.B. Nashville or Nursery. Pogram.

Ten, cartons or trucklots. Cash or approved credit. Terms 2 per cent 10 days, 30 days net. Quotations on other items upon request.

Phone: 8-6698.

TRITSCHLER'S GREENHOUSES,

Nashville 9, Tenn.

## EVERGREEN LINERS

10,000 Andorra Junipers, 8 to 10-in. transplants in open field rows, \$15.00 per 100; \$125.00 per 1000; free samples. Come and see them. Order from this ad. Free packing. Give shipping date.

## WHERRY'S NURSERIES

St. Marys, W. Va.

LINING-OUT STOCK  
Immediate shipment.

	Per 100	Per 1000
Abelia grand., 10 to 12 ft., X.	\$10.00	\$90.00
Irish Juniper, 4 to 6 ft., X.	12.00	
Irish Juniper, 6 to 8 ft., X.	15.00	
Irish Juniper, 10 to 12 ft., X.	30.00	
Hemlock, 6 to 8 ft., X.	15.00	
Hemlock, 8 to 10 ft., X.	25.00	
Retinospora plumosa,		
4 to 6 ft., X.	15.00	
Retinospora plumosa,		
rooted cuttings	7.00	
Retinospora squarrosa veitchii,		
rooted cuttings	7.00	
Retinospora squarrosa veitchii,		
4 to 6 ft., X.	15.00	
Globe Arborvitae,		
rooted cuttings	8.00	75.00
Pyramidalis Arborvitae,		
rooted cuttings	8.00	75.00
Retinospora obtusa crippl,		
rooted cuttings	8.00	
Taxus cuspidata,		
rooted cuttings	10.00	90.00
Taxus baccata repandens,		
rooted cuttings	10.00	90.00

Inquire about Taxus capitata.  
ESHAM'S NURSERIES  
Frankford, Del.

FOR IMMEDIATE  
OR SPRING DELIVERY

Select Clean Stock	
Japanese Spreading Yew.	
12 to 15 ins., B&B.	\$2.00
15 to 18 ins., B&B.	2.50
24 to 30 ins., B&B.	3.50
Clipped Yews, Globe.	
15 to 18 ins., B&B.	3.00
18 to 24 ins., B&B.	3.75
Clipped Yews, Pyramid.	
24 to 30 ins., B&B.	3.50
30 to 36 ins., B&B.	4.50
Norway Spruce.	
3 to 4 ft., B&B.	1.00
4 to 5 ft., B&B.	1.50
Also Pyramid Arborvitae, Mugho Pine and Colorado Blue Spruce.	

Ask For Prices  
NIAGARA HORTICULTURAL PRODUCTS  
St. Catharines, Ont., Can.

NEW INTRODUCTION  
AZALEA HINO-CRIMSON.

Showy, clean, crimson-red, nonfading flower. Large, glaucous, dark green foliage. Excellent forcer. A cross between Hinodegiri and Amoenae and harder than Hinodegiri. Ask for color photo. For shipment commencing Nov. 1, from 2 1/4-in. pots, \$25.00 per 100; limit, 250. Cash with order please.  
JOHN VERMEULEN & SON, INC.  
Westbury, L. I., N. Y.

We are sold out of liners for this fall, but will have for next fall:

	Per 100
900 Canadian Hemlocks, 12 to 15 ins.	\$22.00
1000 Am. V. 1 to 1 1/4 ft., tr.	19.50
1000 Balsam Fir, 1 to 1 1/4 ft., tr.	19.00
400 American Spruce, 1 to 1 1/4 ft., tr.	19.50
245 American Holly, 1 1/4 to 2 ft., tr.	25.00

Free packing. Shipped prepaid. Cash with order, please.

WHERRY'S NURSERIES, St. Mary's, W. Va.

## SPECIMEN TAXUS

See my Ad in this issue for some beautiful specimen Taxus. Also write or call about other specimen Magnolias, etc. Westbury 238, JOHN VERMEULEN, Westbury, L. I., N. Y.

Norway Spruce, 2 to 3 ft., \$1.25; 3 to 4 ft., \$1.50, and 4 to 5 ft., \$1.75. B. & B. P.O.B. on your truck. If you may select and dig your own at reasonable prices. Cut trees after December 10.

CARL CARTER, Roseville, O.

## 2000 COLORADO BLUE SPRUCE

for lining out, all good color,

12 ins. to 18 ins., 18 ins. to 30 ins.

Prices on request.

RIPLEY, The Florist

Colorado Springs, Colo.

EVERGREENS B&B. Each  
1000 Norway Spruce, 2 to 2 1/2 ft., sheared \$1.65  
240 American A. V. 2 1/2 to 3 ft., sheared 1.45  
500 Irish Junipers, 2 to 2 1/2 ft., sheared 1.25

F.O.B. our Nursery; Phone: 9F2

WHERRY'S NURSERIES, St. Mary's, W. Va.

Over 2000 NORWAY SPRUCE, XX, 2 to 6 ft. Suitable for ornamentals or Christmas trees. You dig or cut, look them over and make me an offer.

FRATT NURSERY, R. R. 5, Elkhart, Indiana, U. S. 20 East.

2500 EVERGREENS, 2 1/2 to 7 ft. Includes: American and Pyramidal Arborvitae, Retinospora, Pitzers, Andorra Juniper and Yew. GLOVER'S NURSERY, Hugheville, Md.

## CHRISTMAS TREES.

Nursery-grown Xmas trees.  
Blue, White, and Norway Spruce cut for trade.

I. C. PATTON, Shepherd, Mich.

## AZALEAS

Snow and Pink, good spread, 2 to 3 ft., \$10.00 per 100; 3 to 4 ft., \$15.00 per 100.

MRS. CHARLIE ROBINSON, Greenville, Ga.

BUXUS, SUPPRTCOSA, 8 to 10 ins., bushy, stout, 2 plants, \$10.00 per 100.

MRS. CHARLIE ROBINSON, Greenville, Ga.

## FRUIT TREES

Special for shipment at digging time about November 1 to 15.

PEACHES, all standard varieties.

18 ins. and under	10c
18 to 24 ins.	15c
2 to 3 ft.	25c
3 to 4 ft.	35c
4 to 5 ft.	50c
5 to 6 ft.	60c
6 ft.	80c

In lots of 100 or more assorted. Under 100 5c each more.

PLUMS, 10c each higher.

APRICOTS, 15c each higher.

PEARS, 20c each higher.

Write for list.

FRIOU FLORAL & NURSERY

1114 E. Henderson St., Cleburne, Tex.

## GRASS SODS

We again solicit, after four years' absence, your GRASS SODDING contracts. No job too large or too small for us to handle.

ABBOTT'S GARDEN SERVICE

Box 205, Flushing, N. Y.

## HARDY PLANTS

PERENNIALS.  
Sturdy field-grown clumps.

	Per 100
Achillea The Pearl	\$ 5.00
Aquilegia Mrs. Scott Elliott	8.00
Arabis Alpina	12.00
Arabis Alpina Roses	12.00
Armeria Lauchiana	12.00
Dianthus Headland Queen	12.00
Dianthus Esther Queen	12.00
Dianthus plumarius	8.00
Dianthus Pink Cushion	15.00
Delphinium Wrexham Hyb.	12.00
Delphinium Belladonna	10.00
Delphinium Bellamossium	10.00
Fuchsia Magellanica	20.00
Funkia Sub. Grandiflora	20.00
Gypsophila Paniculata	5.00
Gypsophila Bristol Fairy	35.00
Papaver Giant Sanford	8.00
Shasta Daisy Alaska	10.00
Teucrium chamaedrys	15.00
Veronica spicata	12.00
Viola Prince of Wales	15.00
Viola Frey's Fragrant	15.00

Cash With Order.

STORRS & HARRISON NURSERIES INC.

Painesville, O.

## PEONIES.

	Per 10	Per 100	Per 1000
Alexandre Dumas	\$3.00	\$27.00	\$250.00
Candidissima	4.00	35.00	300.00
Chestine Gowdy	10.00	85.00	600.00
Cherry Hill	7.50	60.00	
Delicatisima (Pl. Tr.)	3.00	27.00	250.00
Edulis Superba	3.00	27.00	250.00
Festiva Maxima	3.00	27.00	250.00
Floral Treasure	3.00	27.00	250.00
Fragnans	3.00	27.00	250.00
Karl Rosenfield	7.50	60.00	500.00
Lady Lenora Bramwell	3.00	27.00	250.00
Le Cygne	20.00	150.00	
L'Eclatante	7.50	60.00	500.00
Mme. Jules Desmet	10.00	125.00	
Mona, Jules Elie	6.00	55.00	500.00
Officinalis Rubra	6.00	55.00	
Reine Hortense	6.00	55.00	500.00
Sarah Bernhardt	6.00	55.00	500.00
Solange	6.00	55.00	
Queen Victoria	3.00	27.00	250.00

Peonies according to color:

White and Pink..... 3.00 25.00 250.00

Red..... 3.50 30.00 250.00

PHIL LUTZ PEONY FARMS,

Boonville, Ind.

## HARDY PLANTS—CHRYSANTHEMUMS.

All 1-yr. clumps, well rooted.

	Per 10	Per 100
Jean Treadway,		
sparkling pink, red eye	\$0.50	\$12.00
Algonquin,		
bright clear yellow, early	1.50	12.00
Chippewa,		
large bloom, reddish-wine	1.60	12.50
Champion,		
bronz-red cushion type	1.50	12.00
Maroon Mum, shaggy petal, early	1.35	11.00
Dahlia Flower,		
shaggy wine, early	1.35	11.00
Bronze Cushion	1.40	11.50
Following plants set in row, August		
Platyedon, blue	1.00	8.00
Hibiscus, Pink Beauty	1.00	8.00
Aquilegia Mrs. Scott Elliott	1.50	11.00

30 plants or more at the 100 rate.

FAIRVIEW NURSERY, Coon Rapids, Ia.

## PEONIES

Young, strong plants, 2 to 5 eyes.  
\$25.00 per 100; \$225.00 per 1000.

Alba Superba	Blushing Bride
Candidissima	Doyenne d'Engheim
Duchesse de Nemours	Faust
pink	Francis Ortegat
Fragrantissima	Perfection
Marie Antoinette	Sweetheart
Rosea Superba	

W. T. SMITH CORPORATION

Geneva, New York

VINCA MINOR (Myrtle), 6 to 9 ins., field-grown, ready for landscaping. \$10.00 per 100 clumps. State and federal inspection.

SYLVANIA NURSERY & PEAT CO.

New Galilee, Pa.

Field Clumps (Roots only) HARDY ENGLISH CHRYSANTHEMUMS: Alpink, Bronze, Frieda, Cerise, Daily Express, Elite, Frieda, Hillcrest Red, Pink Reward, Pink Profusion, Pink Princess, Snowball, Sunlit, Nellie Richardson, Polly, Revell, 50c each; Belle Mauve, Border White, Crimson Buttercup, Egypt, Gold Standard, Gladiator, Leda, Mrs. Pattie, Vulcan, 40c each. Our choice 12 varieties, \$5.00; or 25 for \$10.00. Other Hardy Mums: Amber Glow, Rodell, Algonquin, Red Gold, Red Riding Hood, Chippewa, Avalanche, Mrs. Hastings, Burgundy, Harbinger, Autumn Lights, Mrs. Zeeman, Robert Brydon, Solid Gold, 35c each. Rodell, Yellow Anemone, Ruby, Silverbells, Sioux, Sandra, Vivid, Minong, Sunkist, Red Fiare, Cimarron, Miti, Sappho, 25c each. Cash. F.O.B. Daisies, Shasta, Hartze and Elder, 3c each. HILLVIEW GARDENS, Fort Madison, Iowa.

## HARDY FIELD-GROWN MUMS

Immediate Shipment—\$25.00 per 100

200 Chippewa, 200 Lavender Lady.

2000 Red Gold, 500 Polar Ice.

1000 Avalanche, 200 My Lady.

1000 Autumn Greetings, 200 Mandalay.

2000 Butterball, 500 Algonquin.

500 Robert Brydon, 500 Y. Velvet.

THOMSEN NURSERY

4108 Nawadaha Blvd., Minneapolis 6, Minn.

## PEONIES

3 to 5-eye div., \$35.00 per 100

Alexandre Dumas, rose.

Festiva Maxima, white.

Louis Vanhoutte, cherry-red.

L'Eclatante, crimson.

Modele de Perfection, pink.

About 500 each variety available.

EASTERN SHORE NURSERIES, INC.

Easton, Maryland.

## PRIMULA POLYANTHA. Western Rain-

bow Glants. Seedlings sold out until Novem-

ber. 1 X plants, \$12.50 per 100, will bloom

heavily next spring. Seeds, Tr. packet, \$1.

4 oz., \$2. Also seeds, pulverulentia, denticu-

lata, floridae, auricula. Trade price, \$1.

WESTERN HORTICULTURAL SUPPLY

3629 S. E. 67th Ave., Portland 6, Ore.

## HERBS

Thyme, Spearmint, Apple Mint, Sage, Com-

mon Lavender, Twickie's Purple Lavender,

1-yr., 25c; 2-yr., 50c; Cultivated Chives,

\$1.50 doz.; \$7.00 per 100.

WARREN SHINN, Woodbury, N. J.

## BLEEDING HEARTS

DICENTRA SPECTABILIS, 3 to 5 eyes,

\$40.00 per 100. DICENTRA EXIMIA, 3 to 5

eyes, \$20.00 per 100. Cash with order.

J. HENDRIKS, Grower, Portage, Mich.

## PERENNIAL VERBENAS.

Rich scarlet, Snow, pink and lavender.

Large field plants, \$4.00 per 100, \$25.00 per

1000.

MRS. CHARLIE ROBINSON, Greenville, Ga.

## VIOLETS.

Sweet-scented blue, hardy, heavy bloomers;

large plants, \$3.00 per 100, \$25.00 per 1000.

MRS. CHARLIE ROBINSON, Greenville, Ga.

Tritomas, Phlox, Carnation and many other

hardy perennials. Write for Surplus List.

SUNBEAM FARM

2429 Clague Road, Rocky River 16, O.

## ROOTS

Northern-grown MARY WASHINGTON

ASPARAGUS, October, November or April

delivery. Strong, healthy roots and crowns.

Shipped when dug. Packed 25 per bunch in

peat. Order now. 1-yr-old, \$5.00 per 250;

\$5.00 per 500; \$14.00 per 1000. 2-yr-old, \$6.00

per 250; \$10.00 per 500; \$18.00 per 1000.

ARTHUR E. GUSTAFSON,

Pine City, Minn.

## STRAWBERRY RHUBARB

Per 100

Jumbo size divisions.....\$12.00

Medium size divisions..... 9.00

Small size divisions..... 6.00

Less 15 per cent in lots of 500 or more.

Ready to ship now, cash with order.

GRIMSHAW NURSERY, Hayward, Calif.

## GIANT ASPARAGUS ROOTS.

3 yrs. old. Great for fall trade. Roots 1 1/2 to

2 ft. long, immense, finest ever. Tied 50 to

bundle, \$4.50 per 100; \$25.00 per 1000. Also

Rhubarb and Horse-radish roots.

WARREN SHINN, Woodbury, N. J.

## RHUBARB

Per 100

McDonald Rhubarb.....\$17.50

Chippans Canada Red..... 35.00

No. 1 Division

HOME NURSERY, Cuba, Kan.

## SEEDS

V. and R. DELPHINIUM SEEDS.

New crop, Pacific Giant strain.

Guaranteed good mixed seeds.

Order early.

\$5.00 per oz.

SEBASTAPOL NURSERY CO.



## SEEDS—Continued

SEEDS—POSTPAID	Per Pound
Live Oak, Evergreen Oak (in moss).....	\$1.75
Chinese Chestnuts, (in moss).....	1.10
Japanese Chestnuts, (in moss).....	1.10
Chinquapin, (in moss).....	1.10
Serotina Pear, oz. 50c.....	4.00
Thornless Rose Multiflora.....	3.50
Japanese Walnuts.....	.50
Long Leaf Pine.....	3.50
Chinese Quince, (large-fruited).....	6.00
Pecan, seedling and Stuart.....	.40
Persimmon, native.....	.25
White Dogwood.....	.20
Citrus Trifoliata.....	.50
Catalpa Beans.....	.70
Umbrella, China.....	.50

STOVALL NURSERY, Leakesville, Miss.  
**CALIFORNIA PEACH SEEDS**  
 California Lovell Peach Pits from 1946 crop. Well cured for in drying. In bags of about 80 lbs. Each \$2.00 per bushel. In lots of ten and up, \$2.50 per bushel, F.O.B. Rogers, Ark.  
**BENTON COUNTY NURSERY CO., INC.**  
 Rogers, Ark.

**MONTMORELL SEEDS.**  
 Germinate well; seedlings bud readily or make good trees without budding.  
 Pound, 60c; 10 pounds, \$5.00 postpaid.  
 40c per pound F.O.B.

**NOBLE NURSERY, Noble, Okla.**  
**DICENTRA EXIMIA SEEDS.**  
 New crop guaranteed clean.  
 \$1.00 per oz., \$12.50 per lb.  
**DELIGHTFUL GARDENS**  
 Phalanx Sta., O.

## SHRUBS and TREES

**TURNER BROTHERS NURSERY**  
**SURPLUS LIST**  
**DOGWOODS and SHADE TREES**  
 All the following trees are well shaped specimens and have not been crowded in the rows.  
**CORNUS FLORIDA**

	Per 10	Per 100
60 5 to 6 ft., B&B.....	\$35.00	\$300.00
250 6 to 8 ft., B&B.....	45.00	400.00
120 8 to 10 ft., B&B.....	65.00	600.00
20 10 to 12 ft., B&B.....	85.00	800.00

ACER DASCARUM	Ft. high	Inch. cal.	Per 10	Per 100
25 12 to 15 2 to 2½.....	27.50	250.00		
25 15 to 18 2½ to 3.....	35.00	325.00		
25 15 to 18 3 to 3½.....	45.00	425.00		
10 15 to 18 3½ to 4.....	60.00			
5 15 to 18 4 to 5.....	75.00			

ACER DAS. WIERI	Ft. high	Inch. cal.	Per 10	Per 100
5 15 to 18 3½ to 4.....	75.00			
5 15 to 18 4 to 5.....	90.00			

ACER PLATANIDES	Ft. high	Inch. cal.	Per 10	Per 100
60 12 to 15 2 to 2½.....	48.00	450.00		
75 12 to 15 2½ to 3.....	58.00	550.00		
50 15 to 18 3 to 3½.....	75.00	725.00		
25 15 to 18 3½ to 4.....	90.00	875.00		
10 15 to 18 4 to 5.....	120.00			

ACER PLAT. SCHWEDLERI	Ft. high	Inch. cal.	Per 10	Per 100
25 12 to 15 2 to 2½.....	70.00	675.00		
40 12 to 15 2½ to 3.....	85.00	825.00		
20 15 to 18 3 to 3½.....	95.00			

ACER RUBRUM	Ft. high	Inch. cal.	Per 10	Per 100
10 12 to 15 2 to 2½.....	50.00			
25 15 to 18 2½ to 3.....	70.00			
60 15 to 18 3 to 3½.....	85.00	800.00		
20 15 to 18 3½ to 4.....	100.00	950.00		
25 15 to 18 4 to 5.....	120.00			

F. O. B. Nursery  
**TURNER BROTHERS NURSERY**  
 Monmouth & Parker Roads,  
 West Long Branch, N. Y.

## LINING-OUT STOCK

	Per 100	Per 1000
Barberry Thunbergi.....	\$7.50	\$75.00
Atropurpurea, 6 to 9 ins.....	60.00	
Crataegus Lalandi, 4-inch pots.....	8.00	70.00
Foraythia Primulina, 1-yr.....		

Malus in following varieties:  
 1-yr. from grafts: Atrosanguinea and Scheideckeri..... 25.00  
 Lemoinei and Parkmanni..... 30.00  
 Lonicera Bella Albida, Morrowi, Tatarica, Rosa and Rubra.....

1-yr.	Per 100	Per 1000
New Red.....	5.00	
Zebellina.....	6.00	
Tamarix Summer Glow.....	8.00	
Philadelphia Amalthes, purple eye, pots.....	10.00	

1-yr. beds	Per 100	Per 1000
Atlas, large single white.....	15.00	120.00
Belle Etoile, pots.....	20.00	150.00
Belle Etoile, 1-yr. beds.....	20.00	
Fleur de Neige, pots.....	20.00	
Pyramidalis.....	20.00	
Pyramidalis, 1-yr. beds.....	20.00	
Virginalis, 1-yr. beds.....	20.00	

Syringa Sweginzowi Albida, a fine free-blooming lilac with immense trusses of pinkish-white blossoms..... 15.00  
**COTTAGE GARDENS, Lansing, Mich.**

**HALL'S HONEYBUCKLE**  
 (Lonicera Halliana Japonica)  
 Strong No. 1, 3-year, field-grown, 3 to 4 leads, 18 to 20 ins.; carefully graded, selected plants, \$4.00 per 100, \$30.00 per 1000; lighter plants, \$20.00 per 1000. Immediate shipment.  
**MRS. CHARLIE ROBINSON, Greenville, Ga.**

## SURPLUS STOCK FOR FALL

	Per 100
Abelia Grandiflora, 1-yr., 10 to 12 ins.....	\$15.00
Aucuba Japonica, 1-yr., 4-inch pot.....	35.00
Aucuba Japonica, B&B, 10 to 15 ins.....	90.00
Cotoneaster Horizontalis, 6-inch pot, 12 to 18 ins.....	100.00
Ilex Glabra, 1-yr., 2-inch pot.....	20.00
Taxus Cusp. upright (capitata), 1-yr., 10 to 18 ins. X.....	75.00
Taxus Cusp., spreading, 2-yr., 10 to 12 ins. X.....	45.00
Taxus Cusp. Intermedia, 2-yr., 6 to 8 ins. X.....	35.00
Taxus Cusp. Vermeulen, 2-yr., 6 to 8 ins. X.....	30.00
2-yr., 8 to 10 ins. X.....	37.50
2-yr., 10 to 12 ins. X.....	40.00
500 Taxus Cusp. Vermeulen, 1-yr., 15 to 18 ins. XX.....	75.00
Viburnum Burkwoodi, 1-yr., 3-inch pot.....	40.00
Rhytidophyllum, 1-yr., 3-inch pot.....	40.00
Wistaria, lavender, 1-yr. gr., 3-inch pot.....	40.00
Wistaria, white, 1-yr. gr., 3-inch pot.....	40.00

Ask for list.  
**JOHN VERMEULEN & SON, INC.**  
 Westbury, L. I., N. Y.

LINERS and FINISHED PLANTS	Per 100
2000 Nandinas, 4 to 8 ins.....	\$15.00
2000 Nandinas, 8 to 12 ins.....	20.00
2000 Burfordi Holly, rooted cuttings, 4 to 6 ins.....	20.00
7000 Nandinas, 2 to 4 ft., 3-yr. plants, 2 to 5 canes.....	
2000 Waxleaf Liguidum, 3-yr. plants, 2 to 3 ft., bushy.....	
1000 Crape Myrtle (watermelon-red), 3 to 4 ft., extra-nice.....	
We dig, \$150.00 per 100; you dig, \$100.00 per 100.	
2000 Ligustrum Japonicum, 3 to 5 ft., extra-green and bushy.....	
We dig, \$100.00 per 100; you dig, \$50.00 per 100.	

Bring your truck and labor and get what you need. Labor conditions force us to offer this stock at the above prices.  
**BUCHANAN'S NURSERY,**  
 Phone: 2-3939

**Western Blvd. Raleigh, N. C.**

SOUR CHERRIES	Each	Per 10
Early Richmond, Montmorency, Brassington, 2-yr., 9/16-in.....	\$1.00	\$ 9.00
AFRICOTS		
Hungarian Best, 2-yr., 11/16-in. 1.20	10.00	
Moorpark, 2-yr., 9/16-in.....	1.00	9.00

CYDONIA JAPONICA	Per 10	Per 100
15 to 18 ins.....	\$2.50	\$20.00
18 to 24 ins.....	3.00	25.00
2 to 3 ft.....	4.00	35.00

Cash with order.  
**STORRS & HARRISON NURSERIES, INC.**  
 Painesville, Ohio

NORWAY MAPLES, 2½ to 3-in. cal.	Each	Per 10
3 to 4-in.....	\$3.00	4.00
4 to 5 in.....	6.00	
5 to 6-in.....	8.00	
6 to 7-in.....	2.50	
3 to 4-in.....	2.50	
4 to 5-in.....	4.50	
THUJA PYRAMIDALIS, 12 to 14 ft.....	4.50	
JUNIPER PFITZER, 6 to 8 ft. spd.....	3.00	
You dig, SAMUEL I. LEH, 324 N. 13th St., Allentown, Pa.		

**ROSA MULTIFLORA JAPONICA**  
 These are exceptionally bushy, well rooted plants. You will appreciate the quality of this stock.

	Per 1000
¾-inch and up.....	\$49.00
¼ to ¾-inch.....	38.00
No. 1, 3/16 to ¼-inch.....	28.00
No. 2, 2/16 to 3/16-inch.....	20.00

Prices net; boxing and bailing at cost.  
**FORREST KEELING NURSERY,**  
 Elsberry, Mo.

**PRIVET, CALIFORNIA—1-year**  
 Heavily Branched, Strong Stock.

	Per 1000
12 to 18 ins.....	\$40.00
18 to 24 ins.....	50.00
24 to 30 ins.....	60.00

Write for quotations on quantities. No shipping.  
**EVERGREENS ACRES**  
 U. S. Route 13, McDonough, Del.  
 P. O. Middletown, Del.

	Per 100
American White Elm, 1½ to 2-in. cal.....	\$100.00
American White Elm, 2 to 2½-in. cal.....	150.00
American White Elm, 2½ to 3-in. cal.....	200.00
American White Elm, 3 to 4-in. cal.....	300.00

	Per 10
Savin Juniper, 24 to 30 ins.....	\$17.50
Savin Juniper, 30 to 36 ins.....	20.00
Savin Juniper, 36 to 42 ins.....	25.00
Choice Stock. Must be moved now.	

**MERTEL NURSERY, Peru, Illinois.**  
**BERBERIS DARWINI, Evergreen, Hardy**  
 north to New Jersey and to British Columbia on west coast. New crop seeds. D. B. Trade packet, 50c; ¼ lb., \$1.50; pound, \$4.50.  
**WESTERN HORTICULTURAL SUPPLY**  
 3629 S. E. 67th Ave., Portland 6, Ore.

**REGEL PRIVET—2000 true Regel, grown**  
 from cuttings. Heavy 3 to 3½ ft., 4 canes or more. \$45.00 per 100.  
 The Denison Nursery & Greenhouse  
 Spencerville, O.

## AMERICAN NURSERYMAN

REMOVAL SALE	Per 100
Azalea Vaseyi, 3 to 4 ft.....	\$275.00
Azalea Vaseyi, 2 to 3 ft.....	225.00
Azalea Vaseyi, 1½ to 2 ft.....	175.00
Azalea Kaempferi, 2 to 3 ft.....	250.00
Enkianthus Camp., 8 to 7 ft.....	350.00
White Pine, 2 to 3 ft.....	200.00
Viburnum Carlesii, 2 to 3 ft.....	125.00

**BRIMFIELD GARDENS NURSERY**  
 245 Brimfield Rd., Wethersfield, Conn.

12,000 Rosa Multiflora Japonica seedlings, 9-in. cuttings, well rooted, well branched, 3/16 to ¼-in., \$4.00 per 100; \$25.00 per 1000.  
 50,000 Rosa Multiflora Japonica, thornless 9-in. cuttings, \$8.00 per 1000. Roses, 2-yr. No. 1, \$5.00 per 10; \$45.00 per 100. Climbing Mrs. Robert Peary, Climbing Blue Rose (Veilchenblau), F. K. Druschki, M. P. Wilder, Mrs. John Laing, George Arends.  
**FINGER LAKES NURSERIES, Geneva, N. Y.**

**PRIVET AMUR RIVER NORTH**  
 1-yr. cuttings.

	Per 1000
6 to 12 ins.....	\$25.00
12 to 18 ins., 2 canes and up.....	35.00

Cash, free packing  
**NORTH RIDGE NURSERY, Elyria, O.**

**AMERICA'S MOST LOVELY ORNAMENTAL TREES**—Liquidambar Straciflua (Sweet Gum), Red Maple, Red Cedar, Red Oak, Black Gum, American Elm, Magnolia Glauca, Crab Apple, Pine and Snow Fringed (Graybeard), No. 1, 2-year, \$15.00 per 100; No. 1, 2-year, \$20.00 per 100. Quantities for sale.  
**MRS. CHARLIE ROBINSON, Greenville, Ga.**

**DOGWOOD (Cornus Florida)**—Large white, mammoth-flowered, good spread; 2 to 3 ft., \$10.00 per 100; 3 to 4 ft., \$15.00 per 100; 4 to 5 ft., \$25.00 per 100; 5 to 6 ft., \$30.00 per 10. Attractive price on 1000 lots or more.  
**MRS. CHARLIE ROBINSON, Greenville, Ga.**

**PIN OAK LINERS.**  
 Select Quercus palustris seedlings, 9 to 12 ins., 2/16 to 3/16-in. caliper, \$25.00 per 1000.  
**F.O.B. Elsberry, Mo.**

**FORREST KEELING NURSERY,**  
 Elsberry, Mo.

**SWEET SHRUB (Calycanthus Florida)**, a large-leaved shrub with spicy, fragrant chocolate-colored flowers; 2 to 4 ft., \$15.00 per 100; 3 to 4 ft., \$20.00 per 100. Quality stock.  
**MRS. CHARLIE ROBINSON, Greenville, Ga.**

**ROSES**  
 See our display ad on page 26.

**OSARKS PLANT FARMS, INC.,**  
 Springfield, Mo.

## MISCELLANEOUS

	Per lb.
American Plum pits, c.s.....	\$0.30
Juniper Virginiana, c.s., northern seeds.....	5.00
Betula Papyrifera.....	4.50
Betula Populifolia.....	4.50
Lily Elegans, 2 to 5 ins., \$12.00 per 100; 5 to 6 ins., \$15.00 per 100.	
Single Tiger, 4 to 5 ins., \$3.00 per 50; 5 to 6 ins., \$4.00 per 50.	

Per 100  
 Coral Lily, No. 1 Bulb..... \$ 8.00  
 Delphinium B&L Hybrid, 2-yr..... 10.00  
 Delphinium Belladonna, 2-yr..... 8.00  
 Delphinium Bellamosum, 2-yr..... 8.00  
**NEWLAND'S NURSERY, Lake City, Minn.**

3000 Coral Lily, flowering size, \$7.00 per 100, \$50.00 per 1000.  
 2000 Cumberland Raspberry tips, heavy, \$4.00 per 100, \$35.00 per 1000.

500 Lily of the Valley, heavy, \$2.00 per 100, \$20.00 per 1000. Cash with order, boxing free.  
**IOWA NURSERY & LANDSCAPE CO.,**  
 Le Mars, Ia.

Berry Plants, Garden Roots, Herbs. Send for list of above for fall planting.  
**WARREN SHINN, Woodbury, N. J.**

## DECORATIVES

**HOLLY.**  
 Holly for your Christmas needs. **QUALITY NEVER BETTER.** Bright green foliage, well berried, packed in 2x2x4 ft. cases, \$8.00 per case. Mistletoe, well berried, packed in bushambers, \$4.00 per hamper. Long-needle Pines, 3 to 4 ft. high (very beautiful), \$2.00 per doz., \$15.00 per 100. Terms: CASH WITH ORDER.

**CAVENAUGH & CAVENAUGH,**  
 Rose Hill, N. C.

PINE CONES	Per 100
Hard Cones, 1½ to 2½ ins.....	\$2.00
White Pine Cones, 3½ to 6 ins.....	2.00
Hard or White Cones, \$16.00 per 1000.	
Great Jeffrey Cones, 5 to 8 ins., each 15c.	
Assorted Cones, \$2.00 per box.	
Gum Balls, 1½ ins., all with stems, \$2.50 per bu.	
Sample box of our cones, \$1.00 postpaid.	

**MARYLAND NURSERY, Edmonston, Md.**  
**AMERICA'S FINEST NATURAL CONES**—We are in the midst of South's best, perfect, uniform size, selected Pine Cones, Sweet Gum balls, Cotton and Chinaberry pods, \$2.00 per bu.; \$1.00 per bu. in lots of 500 bu. or more. Immediate shipment; satisfaction guaranteed.  
**MRS. CHARLIE ROBINSON, Greenville, Ga.**

## FRAGRANT BALISAM TIPS

Fresh cut, 5 to 12-in. clippings of selected medium heavy Balsam Fir, packed loosely in corrugated cartons, no surplus wood, no waste; one 30-lb. box is easily the equivalent of a standard 100-lb. bale.

Single 30-lb. cartons.....\$5.00 each  
5 or more 30-lb. cartons.....4.00 each  
25 or more 30-lb. cartons.....2.85 each  
15-lb. sample cartons.....3.00 each

Prices F.O.B. Vermont. Cash with order, please.

YOUNG'S NURSERY, INC., Norwalk, Conn.

## BEAUTIFUL DECORATIONS

Sumac and Cattails.

Uniform size, \$5.00 per 100.

MRS. CHARLIE ROBINSON, Greenville, Ga.

## SUPPLIES

A. F. S. "EASI-OFF" WOOD PLANT BANDS		
Size in in.	Weight per 1000	Per 1000
1 1/4 x 1/2 x 1/2	12 lbs.	\$3.35
2 x 2 x 1/2	15 lbs.	3.60
2 1/2 x 2 1/2 x 3	21 lbs.	4.20
3 x 3 x 2	21 lbs.	4.60
3 x 3 x 4	32 lbs.	5.30
4 x 4 x 4	40 lbs.	6.30

Packed 1000 to the carton.

We do not break the cartons.

For handling and shipping our 1 1/4-inch and 2-inch sizes of Plant Bands.

LIGHT WOOD FLATS		
		Per 100
M-370; holds twelve 1 1/4-inch Bands		\$2.75
M-380; holds twelve 3-inch Bands		3.30
M-392; holds twelve 2 1/2-inch Bands		3.75
M-393; holds six 3-inch Bands		3.55
M-394; holds six 4-inch Bands		3.95

Packed 100 to the carton. We do not break cartons. Shipped promptly from the factory in Michigan.

AMERICAN FLORIST SUPPLY CO.

1335 W. Randolph St. Chicago 7, Ill.

## KNOCK-DOWN FLATS.

Made from a good grade of Southern Yellow Pine, since Cypress is not available. Standard specifications, inside measurements.

16x12x2 1/2	\$16.25 per 100
16x14x3 1/2	20.50 per 100
20x14x2 1/2	20.00 per 100
20x14x3 1/2	23.00 per 100
22 1/2 x 18 1/2 x 3 1/2	25.00 per 100
22 1/2 x 15 1/2 x 3 1/2	25.00 per 100

All other sizes quoted on request. Prices F.O.B. Birmingham.

We are manufacturers, not jobbers. Freight to any point is a small item per Flat. Our Flats are the best. Why pay more? Our quality guaranteed. Prompt shipment, any quantity. Attach check to order.

HIGHTOWER BOX & TANK CO.

Birmingham, Ala.

## CANE STAKES.

Carefully selected. Uniform quality. Properly cured and dyed dark green.

STANDARD, pencil thickness.

No. G-32 2 1/2 ft.	Bale of 2000.....\$13.90
No. G-33 3 ft.	Bale of 2000.....16.65
No. G-34 3 1/2 ft.	Bale of 2000.....19.45
No. G-35 4 ft.	Bale of 2000.....23.35

TONKIN STAKES—Bamboo

Dyed Green—Medium Heavy.

No. G-42 3 1/2 ft.	Bale of 500.....\$ 7.75
No. G-43 4 ft.	Bale of 500.....8.70
No. G-44 5 ft.	Bale of 500.....11.95
No. G-45 6 ft.	Bale of 500.....13.75
No. G-46 7 ft.	Bale of 500.....17.70

We cannot break bales.

Quantity discounts 10 to 24 Bales, 5 per cent.

25 Bales or more, 7 1/2 per cent.

SCHUFF SUPPLY CO., Wilmette, Ill.

THE-TEX Saves any tree from damage by rabbits, mice, etc. Also effective repellent for fruit tree borer, scab, winterkill. Also used as adhesive in any dust spray. Applied any time of year like varnish and lasts at least one year. Applied to 100 trees in one hour. Unusual portion never spoils. Results guaranteed. Prices Postpaid: 1 pound, \$1.00; 10 lbs., \$9.00; 50 lbs., \$45.00; 100 lbs. or over, \$80.00 F.O.B. Noblesville. Used at Orchardview since 1942. Sold in 30 states in 16 months. Trade Mark patent issued 1946. Rev. E. L. Eckert, Box 91, Noblesville, Ind.

## FINE SCREENED PEAT

Acid pH 4-5. Some Nitrogen. Our Peat is excellent for Gardenias, Camellias, Azaleas and Hydrangeas, also for mixing with soil for potting, seed flats and mulching. Order early. Packed in 2-bu. bags, 5 to 24 bags, \$1.00 each; 25 to 49 bags, 85c each; 50 to 100 bags, 80c each. Bulk cartload, about 60 yards or 600 bags, \$275.00 per car. We ship same day order received. Cash, please.

HAASE BROS. Peoria, Ill.

116 S. Jefferson St.

BAMBOO CANE STAKES.

Special sizes supplied on request.

DYED GREEN, pencil thickness.

	Contents	Price
	Per bale	Per 1000
1 1/2 ft.	1000	\$ 5.00
2 ft.	1000	6.50
3 ft.	1000	9.00
3 1/2 ft.	1000	10.25
4 ft.	1000	12.50
5 ft.	1000	18.50

NURSERYMEN'S EXCHANGE

928 Howard St. San Francisco 3, Calif.

## IMPORTED CANE STAKES

Check your needs and order now.

Size	Per 1000
15 in.	\$2.60
18 in.	4.10
24 in.	5.40
30 in.	6.90
36 in.	8.30
48 in.	10.75

2000 per bundle

AMERICAN BULB CO.

1335 W. Randolph St. Chicago 7, Ill.

PROFIT WITH PERF-O-RAIN.

Rain when you want it—low pressure—rectangular strip watered—No overlap—No sprinkler heads or other gadgets—Portable lightweight pipe—Long life. Write for free folder. W. R. AMES COMPANY OF FLORIDA, 3905 E. Broadway, Tampa 5, Florida, or W. R. AMES COMPANY, 150 Hooper St., San Francisco 7, Calif.

MAGIC ELECTRIC WELDER, 110-volt AC-DC; welds, brasses, solders, cuts all metal; easy to use; full directions. Complete with power units, flame and metallic arc attachments, carbons, fluxes, rods, mask. Only \$19.95. Used by the Navy. Guaranteed one year. Splendid for nursery and farm use. MAGIC WELDER MFG. CO.

341NA Canal St., New York, N. Y.

SOIL HEATING EQUIPMENT, designed by a grower and engineer, for commercial propagation. Cable, soil thermostat and pilot lamp to heat 20 sq. ft., \$11.40; 40 sq. ft., \$14.25; 60 sq. ft., \$17.10; 80 sq. ft., \$19.95, and 150 sq. ft., \$27.05. F.O.B. Seattle. L. N. ROBERSON CO.

1539 E. 109th St. Seattle 55, Wash.

Complete Hot Water Heating System for greenhouse, size 15 x 35 ft. in good shape. Immediate possession \$150.00. Also greenhouse for above system for \$100.00 in fair shape. Both for \$200.00.

WHERRY'S NURSERIES

St. Mary's, W. Va.

RUBBER. Your Rubber requirements are important. Know where to get it when you want it. Belts, rubber bands, boots, coats, gloves, hose, spray bulbs, aprons, budding strips. Get our price sheet and catalog today. BROADWAY RUBBER MFG. CO.

Louisville 2, Ky.

## SPECIAL SALE

Sphagnum moss, long fibered in standard burlap bales at \$1.55. Milled sphagnum moss for control of damping off in seed flats, etc., at \$1.55 per bag. F.O.B. Floodwood, Minn.

COLBY PIONEER PEAT CO., INC.

Hanlontown, Ia.

SOIL HEATING CABLE by "GRO-QUICK." New shipping heavy duty cable. New soil temp. thermostat with pilot light, \$9.50. Bottom heat can't be beat for rooting cuttings, for forcing. See advt. this issue. GRO-QUICK.

366 W. Huron St., Chicago 10, Ill.

## PRINTING

Letterheads, billheads, statements, cards, envelopes, tags, blotters, folders, catalogs, samples. Send copy for estimate. J. GARLAND HILL, Dept. A, Seaford, Del.

GIBRALTAR Frost Covers pay for themselves. Economical, long-lasting, ideal for windbreaks. 5 ft. x 5 ft., \$13.15; 10 ft. x 10 ft., \$24.00; 15 ft. x 15 ft., \$33.00. NEW AMSTERDAM IMPORT, 122 Chambers St., New York 7, N.Y.

## SEED STORE FIXTURES

Bins, Cabinets

WALKERBILT

Penn Yan, N. Y.

COTTONETTE Squares are best for balling.

Saves time and twine. All sizes in stock.

Write NEW AMSTERDAM IMPORT

122 Chambers St., New York 7, N. Y.

## WANTED

WANTED.

Do you have any good liners in the following items? If so, I would appreciate hearing from you.

I need: Juniper, Pfitzer, Savin, Andorra, Hetzi, Bar Harbor, Taxus Cuspidata, Cus. Capitata, Hicks, Media, Vermeulen, Hilli; Spiny Greek Juniper, Swedish Juniper, Red Barberry seedlings or cuttings.

Please write: RAY HAFELI,

9254 East Outer Drive

Detroit 5, Mich.

What have you to offer in Strawberry Plants, Grapevines, Raspberry Plants, Boysenberry Plants, lining-out stock Evergreens and Shrubs; fall and spring delivery; write us, Box 710.

E. W. TOWNSEND & SON NURSERIES

Salisbury, Md.

WANTED—Colorado Spruces, blue and green, to be cut for Christmas trees, size 2 to 10 feet, need about 500. State price in ground or delivered. JOHN HOVERMAN & SONS, INC., State Hwy. Rt. 17, Rochelle Park, N. J.

## WANTED

Japanese Cedar, Cryptomeria Japonica, lining-out stock; Weeping Willow, Salix Baby-lonica, and Rosa Multiflora.

JOHN H. PHIPPS, Box 707, Tallahassee, Fla.

## U. S. D. A. CHANGES.

Secretary Anderson recently announced the voluntary transfer of P. V. Cardon from the post of administrator of the agricultural research administration of the United States Department of Agriculture to the position of special assistant to the chief of the bureau of plant industry, soils and agricultural engineering. At the same time the secretary announced the appointment of Dr. W. V. Lambert to succeed Mr. Cardon as research administrator. Both changes are effective November 1.

Mr. Cardon's request to be transferred to a position of less exacting administrative responsibilities is in conformity with advice of physicians.

Mr. Cardon was born at Logan, Utah, in 1889. He attended the Utah Agricultural College, from which he received the degree of B. S. A., and the University of California, from which he received the M. S. degree. He first began work for the department in 1909 as a special agent for the bureau of plant industry at Nephi, Utah. He left the department in 1920 to join the staff of the Montana Agricultural College and experiment station. He resigned that position to become editor of the Utah Farmer and later became director of the Utah agricultural experiment station. In 1935 Mr. Cardon returned to the department as head of forage crops investigations. From that position he was promoted to be assistant chief of the bureau of plant industry, assistant administrator of the agricultural research administration and in February, 1945, he was named head of the agricultural research administration.

Dr. Lambert has served as assistant research administrator since April, 1945, and recently as acting administrator. From 1940 until he came to the department in 1945 he was associate director of the Purdue University agricultural experiment station. Before going to Purdue he was in charge of the livestock-breeding program of the bureau of animal industry for four years.

Born at Stella, Neb., in 1897, Dr. Lambert received his B. S. from the University of Nebraska, his M. S. from Kansas State College and his Ph. D. from the University of California. He was brought up on a farm and was an assistant county agent in Nebraska before becoming instructor in genetics and later assistant professor at Iowa State College, Ames. He was in charge of animal genetics investigations at Ames when he first went to the Department of Agriculture in 1936.

## SISAL TWINE—IT'S BACK IN CIRCULATION!

1-Ply MEDIUM Sisal (Mexican Henequen) Twine

Approximately 300 feet to the pound and 180-pound breaking strength.

**IMMEDIATE SHIPMENT**

Limited Quantities available in

5-pound Balls—100-pound Bales—50-pound Single End Reels

Write for samples and prices.

Also available now, **E-Z CREPED WATERPROOF NURSERY WRAP** and **30/30/30 PLAIN** or **CREPED WATERPROOF PAPER**

### EAGLE WRAPPING PRODUCTS CO.

Packing and Shipping Supplies for the Nurseryman

312-330 North Carpenter Street

Chicago 7, Ill.

### PESTS OF EVERGREENS.

[Continued from page 10]

proved effective. Another formula, recommended in New York, is applied the last of June or first part of July, to be followed by a second treatment ten days or two weeks later. The spray formula recommended contains summer spray oil, one gallon; nicotine sulphate, one-half pint; Gold Dust, four and one-half pounds, and water, fifty gallons.

The pine bark aphid makes its presence evident by spots, patches or even incrustations of white, cottony material on the trunk and limbs of pine, especially white pine. Dormant spray oil, diluted according to recommendations on the container, is effective.

#### Soil Pests.

Of the several insects which attack the underground parts of plants, the white grub provides by far the major problem. It is a pest in conifer nurseries from Arizona to northern Wisconsin.

The plump, curled white grubs, the immature stage of May beetles or June bugs, are important pests of a wide variety of plants and are major problems in conifer nurseries, especially in seedling beds. May beetles lay their eggs in May and June, in soil which is grassy or weedy. Therefore, nursery plantings should not be made in land which was grassy or weedy in the spring of the year of planting or the year before the planting was made. If such nurseries are planted, they should be well cultivated and kept free from wild growth. Lead arsenate, used at the rate of five pounds per thousand cubic feet, is effective. It may be applied dry or wet, but in the nursery it can perhaps be best applied dry. For this procedure, five pounds of arsenate of lead should be mixed with fifteen or twenty pounds of fine soil or sand and distributed evenly over

## Learn Landscape Gardening

A thorough home-study course specializing in the design and layout of grounds plus plant and feature selection and location. Training also includes plant propagation, surveying and grading operations, design of sprinkler systems, pruning, budding and grafting, transplanting operations, soil preparation, design of walks and drives, retaining walls, pools, design for border plantings, color harmony, etc.

#### Project Included

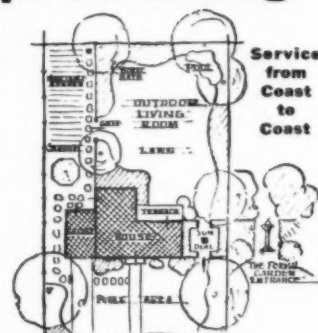
A design project covering problems on property of your choosing is incorporated in your course. This project is developed under the guidance of our Landscape Architects who follow it through to completion thus insuring coverage of your regional conditions.

#### Employee Training

Nurserymen from Maine to California are using this training to upgrade employees. It may be of help to your organization.

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Engineered for the perfection of soils.

Prompt delivery.

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Special equipment built to your specifications.

## SUDBURY SOIL TEST KIT

A must piece of equipment for every nurseryman, florist or farmer, or in fact, anyone growing plants in soil.

Excellent as a gift.

Three sizes; each in a sturdy attractive container.

Priced at \$22.50—\$9.75—\$4.75.

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1,000 square feet. It should then be washed in, but if such facilities are not available it may be cultivated into the soil. Liquid lime-sulphur, one part of the concentrate to nine parts of water, applied in the spring just be-

## HIRED AS SUPERVISOR

F. A. Karnik landed good job as supervisor of landscape construction for State Highway Dept. He had just graduated from American Landscape School.



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Francis A. Robinson, president, is a partner of Robinson & Parnham, member of American Association of Nurserymen; in active professional landscape practice for many years.

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ADDRESS.....

fore the new foliage starts, has given good control and will not remove the bloom on blue spruce, as do the oil sprays. However, lime-sulphur should not be recommended in plantings



where there is danger of its coming in contact with the paint of buildings, as it will discolor the paint.

#### WHITE-PINE QUARANTINE.

Areas into which the interstate movement of 5-leaved pines is regulated have been reduced, and unrestricted interstate movement of gooseberry and currant plants, other than European black currants, into all portions of the country outside of control areas has been provided for in a revision of the white-pine blister rust quarantine by the bureau of entomology and plant quarantine of the United States Department of Agriculture. The former requirement that gooseberry and currant plants be shipped in a dormant or defoliated condition, or be disinfected prior to shipment when consigned to certain states, has been eliminated, by the recent revision of quarantine 63.

THOMAS P. HICKEY has purchased the property of Mack's Nursery, at Jamestown, N. D., and will start a florists' business in connection with the nursery.

FORMERLY with F. H. Woodruff & Sons, Inc., Milford, Conn., and the Tri-State Seed Co., Philadelphia, Pa., James T. O'Brien has opened his own business at 8581 Bustleton avenue, Philadelphia. He is operating under the name of O'Brien Seed Co.

FRED EDMUNDS, curator of the Portland international rose test garden, who was awarded the American Rose Society honor medal when that group met in September at Columbus, O., was honored at a banquet held at the Congress hotel, at Portland, Ore., October 9.

HARRY A. GRAY has been appointed superintendent of parks at Cincinnati, O., after being with the city's park board for the past thirty-four years. Before that time, he was associated with Walter J. Gray & Sons Nurseries, at Cincinnati, founded by his father, Walter J. Gray, who was the first to pioneer the commercial florists' business west of the Alleghenies.

AT the western Washington state fair, at Puyallup in September, four landscape gardens were displayed by prominent nurseries of the state. All made excellent displays, considering the limited space. The exhibitors were Bonnell Nurseries, Renton; Rainier Beach Perennial Gardens, Seattle; Firth Nursery, Tacoma, and Strander Evergreen Nurseries, Seattle. The awards went respectively to the first two named.

## AUTOMOTIVE TREE MOVERS



The above is a picture of one of our 7-foot Rocker Type Tree Movers, owned and operated by the Laur Shade Tree Service, St. Louis, Mo. The tree is a large sugar maple weighing slightly more than five tons. This is the third mover purchased from us by this company.

On short hauls it is possible to move five or six big trees within a day's time. We can use this mover as a crane to load trailers or other trucks for longer hauls.

Place your order early so that you will not be disappointed as all steel stocks are scarce and our production is limited. Write for further information.

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### PETROLEUM RESEARCH.

Developments in petroleum products of aid to nurserymen and farmers were discussed by members of the laboratory staff of Socony-Vacuum Oil Co., Inc., at a luncheon meeting of farm editors and writers at the Blackstone hotel, Chicago, Ill., October 3. During the war the petroleum industry, through its research laboratories, made rapid progress in developing such products as rust preventives, insecticides and lubricants, and these improvements are now becoming available for general use.

Of particular interest to nurserymen was the discussion of "Petroleum Sprays for the Farm," by Dr. R. B. Killingsworth, assistant technical director of the technical service laboratories of the petroleum company. Explaining that oils are employed as vehicles for conventional toxic materials such as pyrethrum, rotenone and Bordeaux mixture, Dr. Killingsworth centered his discussion on interesting petroleum materials which have been developed as aids to the successful commercial application of the new toxic material, DDT.

Most conventional petroleum oils were found to be poor solvents for DDT, and special blending agents had to be developed to obtain the desired solutions. During the war the petroleum company developed a series of unique oils, derived from petroleum, but entirely synthetic in nature, which are capable of dissolving up to fifty-five per cent of their own weight of DDT. Not only are these synthetic solvents versatile enough to allow the distribution of DDT by most known procedures, but they offer possibilities for several new methods of distribution.

Small quantities of DDT may be distributed over wide areas, such as nursery plantings and orchards, by fogs released from generators on the ground or by airplanes. Large-scale testing of oil-base insecticides spread by airplane is currently being carried on by the company in cooperation with the New York state department of entomology.

The fog is generated by injecting the DDT solution into the exhaust manifold of the plane, where the high temperature of the exhaust gases explodes the solution into minute droplets of uniform size, which appear as a fog on emerging from the exhaust. The effectiveness of such fogs depends upon their small uniform particle size, their stability and their ability to settle rapidly, properties largely determined by the oil carrier. Socony-Vacuum has developed a spe-

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HUSKIER PLANTS... that yield  
BIGGER AND BETTER FLOWERS...  
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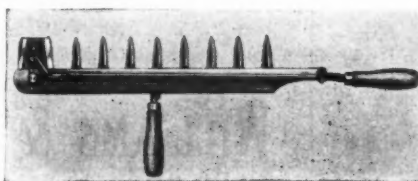
**FEED IT TO YOUR STOCK** — Feed your stock while it is growing. Produces stock that will live when transplanted. Ra-pid-gro is economical, only twenty pounds to the acre.

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Trims 4 and 5 times faster. Easy to use. Weighs only 3¼ lbs.

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LINE OF TILLAGE EQUIP-  
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Bulk cars, \$14.00 per ton. Free sample.

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5000—For Nova Clog 8-100 Plier.....	\$1.25
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cial spray oil for this application, which is capable of dissolving up to forty per cent by weight of DDT. In a series of tests over twice the coverage was obtained as with the same volume of conventional oils.

DDT sprays have been effectively used as lasting control of flies in manure piles and of mosquito larvae in swampy areas or catch basins. For this end, DDT may be dissolved to the extent of twenty-five per cent by weight in a solvent such as PD 554-C, a special Socony-Vacuum aromatic DDT solvent, and about five per cent of an emulsifier added. This solution should be diluted with water to obtain the desired concentration of DDT.

Developments of rust preventives, designed particularly to protect, during the storage season, such highly polished wearing surfaces of machinery parts as shares, moldboards and landsides of plows, were discussed by T. G. Roehner, technical director of the technical service laboratories. Socony-Vacuum has developed Mobilcote 270, a product which has the consistency of a chassis grease and is readily applied by brush. It may be easily removed by wiping with a rag dipped in kerosene, but careful removal of the product is not necessary, as it has fair lubricating characteristics.

Paul V. Keyser, Jr., research director of the research and development laboratories, discussed "Recent Developments in the Field of Lubricating Oil." Dr. Keyser pointed out similarities in service requirements of army and of farm machinery, and showed how developments in lubricants achieved during the war could be applied to machinery in peacetime.

## SHADE TREE FERTILIZATION.

[Continued from page 8.]

little danger from stimulation by late applications of fertilizer; trees have various safeguards which keep their activities in step with the seasons. They unfold buds in spring and return to dormancy in fall with little regard for the amount of food available. Some species, notably the horse chestnut and the buckeye, *Aesculus* sp., cannot be made to develop a single additional leaf by feeding. The internodes lengthen and the leaves are retained longer, but they never produce more than the accustomed number of leaves. In our experience, most of the species generally used as street and lawn trees can be depended upon to grow vigorously and normally after feeding. The only exception might be the maidenhair (*Ginkgo*) which becomes erratic on occa-

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**SPHAGNUM MOSS**—Long-fibered florists' moss and fine-milled for control of damping-off in seed flats, etc.

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**BLACK CULTIVATED HORTICULTURAL PEAT**—Used by experts for top-dressing fine bent grass lawns and golf greens. Will not float when watered.

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## HYPONEX PLANT FOOD

CLEAN—ODORLESS—SOLUBLE—POWDER

USE HYPONEX to grow bigger and better flowers and vegetables in poorest soil—even in sand, clinders or water. Excellent fertilizer for trees, shrubs, lawns and houseplants.

USE HYPONEX for top dressing, seedlings, cuttings and transplants. Produces strong root systems and stems, also more and larger flowers and fruit.

SELL HYPONEX to your customers. Nationally advertised.

1 oz. packet... 10c.—packed 72 to case—wt. 7 lbs.  
3 oz. can... 25c.—packed 24 to case—wt. 12 lbs.  
7 oz. can... 50c.—packed 24 to case—wt. 34 lbs.  
1 lb. can... \$1.00—packed 12 to case—wt. 34 lbs.  
10 lb. drum \$6—25 lbs. \$13—50 lbs. \$25—100 lbs. \$40  
Commercial growers and dealers receive 33-1/3% discount from the above retail prices.

BUY HYPONEX from your jobber or send \$1 for 1 lb. (makes 100 gallons). \$1 credited on first order for 1 drum or case.

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sion and develops long horizontal branches when stimulated.

The manner in which fertilizer can or should be applied to the soil beneath a tree varies almost as much as do the fertilizers in common use. The crowbar used to punch holes is the traditional means. It has several objections, chief of which is that the material is concentrated in a small space, and in some soils the action of the bar may so compact the soil that the plant food is virtually sealed in place. The soil auger and the drill are only slightly better when used alone. Compaction of the sides of the hole may be less, but the material remains concentrated in small holes. The use of compressed air along with the power auger and the use of water under high pressure for both drilling and distribution are both superior methods, since they force the fertilizer into cracks and crevices some distance from the point of application. In this way a concentration of fertilizer in a series of pockets is avoided, and the greater the amount of material used per tree the more important it becomes to use some method of forced diffusion through the soil. When the hydraulic method of forcing fertilizer underground is used on shrubbery, the effects are apparent within three days; when the same method is used for large trees, a darkening of the foliage follows within three weeks.

Since this work was reported to the National Shade Tree Conference in 1935, a number of other papers have appeared. In some cases the author has insisted that a slight reduction in phosphorus and potash made the perfect fertilizer. Another "investigator" sought to prove that only a trade-marked "tree food" would not burn a tree, while the 10-8-6 formula was very dangerous. In a summarization of this work in 1935 there is this statement: "There is some evidence indicating that trees are selective"; therefore, "the formula used is far less important than the quantity applied." In other words, the exact formula to be used is far less important than the know-how, which should also be a part of each tree-feeding operation. The 10-8-6 fertilizer slowly emerged as the outstanding and most dependable combination of nitrogen, phosphorus and potash for shade tree work. It contained over forty per cent of nitrogen, based on the total available plant food, and it was the most concentrated material we had been able to use without the addition of an inert carrier.

One might ask the reason for using a "complete" fertilizer in every



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### SPECIFICATIONS

- Specially designed curved nose.
- Electrically welded—strong, sturdy.
- Equipped with three 4-ply 16-inch tires.
- Over-all width, 45½ inches.
- Over-all height, 7 feet 9 inches.
- Weight, 175 lbs., including 19-ft. chain.
- Attractive, professional appearance.

*Here's our problem... What do you recommend?*

Before the war disrupted supplies of Nursery Twines, such inquiries were meat and drink to us. Too often during the war years it has not been possible to make either an intelligent recommendation or any kind of delivery. • Now that supplies are again becoming available, it will be a pleasure to recommend and supply the Twines required for the needs of the greatly expanded postwar Nursery Industry.



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West coast and X. X. Superior  
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### FOR BETTER CONTROL OF

Lace Bug	Pine Leaf Scale
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And Most Sucking Insects on Evergreens and Ornamentals

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**HUNT'S ACME GRAFTING COMPOUND.** Used for or as a protective coating.

**RODENT REPELLENT.** Protect your trees against rabbits and other rodents

**BRUSH AND HAND GRAFTING WAX.** Send for price list.

Above products endorsed by Michigan State College.  
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case. A balanced fertilizer—containing nitrogen, phosphorus and potash—will not “burn” so quickly as the use of a single salt. Also the need for potash and phosphorus increases as we satisfy the need for nitrogen, and if phosphorus and potash are applied, we can, and often do, accentuate the nitrogen deficiency. Therefore the shotgun method of applying a complete fertilizer is practical and scientifically sound. Even today we do not have available to the tree worker any method by which he can determine the nutrient deficiencies in a particular case. An analysis of the soil will give a picture of its chemical make-up, but it will not show the availability of nitrogen, phosphorus or potash. When it becomes possible for the tree worker to make, or have a laboratory make, an analysis indicating the availability of soil nutrients, then we may not need a complete fertilizer in every case. But when that day arrives, we must also work out the preferences of each species of shade tree, for the nitrogen it demands for each and every potash and phosphorus level. This problem will be further complicated by soil types, so that eventually we shall require a precise knowledge of the preferences of each plant species for nitrogen, phosphorus and potash, for each and every ratio of availability for every soil type. Then and only then can we say that here is the particular fertilizer for white oak and here is the exact and only fertilizer for elms and here is the specific material to use on sycamores.

### TO CURB INFLATION.

After giving considerable thought to the subject, the Committee for Economic Development last month listed a program for curbing inflation. This program has given rise to much comment. Those who have not read about it in the general press may be interested in the proposed program. The C. E. D. listed seven essential elements, as follows:

1. Efforts of management, labor and government to increase productivity.
2. Restraint by individuals, acting singly or collectively, in raising prices, wages and salaries in recognition of the common interest in avoiding a wage-cost-price spiral.
3. Restraint by individuals and businesses in making deferrable expenditures at the present time.
4. Restraint by state and local governments in making expenditures not urgently needed now.
5. A monetary policy to help pre-

## JAPANESE BEETLE CERTIFICATION MATERIALS.

### LARVA TOX 90-10 (Ethylene dibromide-Ethylene dichloride).

A new material that meets government Japanese Beetle Quarantine requirements for treating bare-rooted woody stock by the dip method. More economical than washing, and it eliminates the necessity for a treating chamber. Also excellent for nematodes in the soil.

Pint (makes 42½ gal. solution).....	\$ 1.00
1 Case of 12 Pints.....	10.50
1 Gal. (makes 380 gal.).....	6.75
5 Gal. (makes 1897.5 gal.).....	33.00

### LARVA TOX 2% DDT.

Three pounds of this material treats one cubic yard of potting soil. When applied according to regulations under supervision of an inspector of the U. S. D. A., it permits shipment of plants out of the Japanese Beetle Area without further treatment.

Carton of six 3-lb. containers.....	\$6.00
50-lb. multiwall bags.....	7.50
250 to 500 lbs., per lb.....	.14

Prices on larger quantities on application.

### LARVA TOX FORMULA No. 2 (Ethylene dichloride).

Primarily used in treating potted and balled plants to kill grubs and obtain certification for shipment out of the Japanese Beetle Area. Also effective applied to soil in benches and outdoors to control grubs and other insects, especially when living plants are present. 1 gallon makes 201 gal. of solution.

Pint.....	\$0.85	Case of 12 Pints.....	\$ 7.20
Gal.....	4.50	5 Gals.....	21.00

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P. O. Box 608

New Brunswick, N. J.



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"Quality Peats for All Purposes."

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rodent repellent

Easily applied, economical, effective. One application lasts entire season. YOUR NURSERYMAN OR SEED DEALER HAS IT. Write for detailed literature.

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A pocket-size 48-page booklet. Very complete but concise information, well illustrated. Helpful in preventing claims for dead stock that cost nurserymen money. Sample, 10c. Write for discounts on quantities.

Will send sample copy of each of the above on receipt of \$1.00. Cash with order.

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COMPANY**  
DERRY, N. H.

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"GERALTAE" Frost Covers  
"HORTICULTURAL PEAT MOSS  
SEED MATS

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122 Chambers St., New York 7, N. Y.

vent further expansion of expendable funds in the hands of the public.

6. A vigorous campaign on the part of the Treasury Department to sell, and induce buyers to keep, series E and F bonds of small denominations.

7. A vigorous policy to reduce federal expenditures and maintain sufficient revenues to yield a large excess of receipts over expenditures in the fiscal year ending June 30, 1947.

The C. E. D. report urged government economies which would over-balance the budget by \$5,000,000,000 to \$7,000,000,000, with this comment: "Heroic measures will be needed, but the times call for heroic measures. The reductions in federal expenditures must not only be large; they must take effect promptly. There is a natural tendency for government agencies to deter action in the hope that perhaps the cuts may be avoided.

HOMER KEMP, of Bountiful Ridge Nurseries, Princess Anne, Md., reports the completion of new cold-storage facilities, which were used last spring to good advantage in lengthening the shipping season.

Statement of the ownership, management, circulation, etc., required by the Acts of Congress of August 24, 1912, and March 3, 1933.

Of American Nurseryman, published twice monthly, at Chicago, Ill., for October 1, 1946.  
State of Illinois, } ss.  
County of Cook, }

Before me, a notary public in and for the state and county aforesaid, personally appeared F. R. Kilner, who, having been duly sworn according to law, deposes and says that he is the business manager of the American Nurseryman, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:  
Name of— Publisher, American Nurseryman Publishing Co., 343 S. Dearborn St., Chicago 4, Ill.  
Editor, F. R. Kilner.  
Managing Editor, None.  
Business Manager, F. R. Kilner.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)  
American Nurseryman Publishing Co., Chicago.  
F. R. Kilner, 343 S. Dearborn St., Chicago 4.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the twelve months preceding the date shown above is.....  
(This information is required from daily publications only.)

F. R. Kilner, Business Manager.  
Sworn to and subscribed before me this 26th day of September, 1946.  
Nellie E. Ryan, Notary Public.  
(My commission expires July 25, 1948.)

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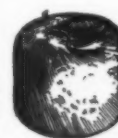


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6 Reels, for.....	84.00
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	No. 0	No. 1	No. 2	No. 3
Height	5 1/2 ins.	6 1/2 ins.	9 1/2 ins.	9 ins.
Diam. Top	5 ins.	6 ins.	7 ins.	8 ins.
Bottom Diam.	4 1/2 ins.	5 1/2 ins.	6 1/2 ins.	7 1/2 ins.
Corresponding Clay Pot	6-in.	7-in.	8-in.	9-in.
Approx. Weight Per 100	35 lbs.	52 lbs.	78-lbs.	88 lbs.
Per 100	\$ 2.75	\$ 4.00	\$ 4.50	\$ 5.00
Per 1000	\$25.00	\$37.50	\$42.50	\$47.50

No. 0 for perennials and for greenhouse use;  
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No. 2 for roses and shrubs;  
No. 3 for large shrubs and transplanting.

F.O.B. KANSAS CITY. TERMS: CASH WITH ORDER. EXCEPT ESTABLISHED ACCOUNTS. Prices Subject to Change Without Notice. Please send 1/4 of amount on C.O.D. orders. Unless otherwise instructed, we will determine method of shipment. If you designate express, we advise you to check the cost with your local Express Agent.

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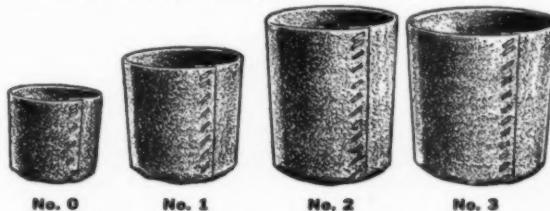
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- ADSTRINGENS.** Very early red, 18 to 24 ins., 2 to 3 ft., 3 to 4 ft.
- BREVIPES.** Midseason white, 18 to 24 ins., 2 to 3 ft.
- DOLGO.** Large white, 18 to 24 ins., 2 to 3 ft.
- FLORIBUNDA ATROSANGUINEA.** Pink, 18 to 24 ins., 2 to 3 ft.
- FLORIBUNDA PURPUREA.** Very early red, 18 to 24 ins., 2 to 3 ft.
- PURPUREA ALDENHAMENSIS.** Purple-red, 18 to 24 ins., 2 to 3 ft.
- PURPUREA ELEYI.** Early purple-red, 18 to 24 ins., 2 to 3 ft., 3 to 4 ft.
- RINGO.** Upright tree, pink flower, 18 to 24 ins., 2 to 3 ft.
- \*SARGENTL.** Low tree, white flower, 18 to 24 ins. (50c—45c).
- SCHEIDECKERL.** Large double pink, 18 to 24 ins., 2 to 3 ft.
- THEIFERA.** Red buds, white flower, 18 to 24 ins., 2 to 3 ft.
- ZUMI CALOCARPA.** Large white flower, 18 to 24 ins., 2 to 3 ft.

Prices on Flowering Crabs  
(Bundles of 10 only)

	Per 10 Each	Per 100 Each
18 to 24 ins.....	<b>\$0.35</b>	<b>\$0.30</b>
2 to 3 ft. ....	<b>.45</b>	<b>.40</b>
3 to 4 ft. ....	<b>.50</b>	<b>.45</b>

\* Note price on this slow-growing variety.

## SYRINGA VULGARIS

- CONGO.** Large red flowers in open clusters; single.
- JACQUES CALLOT.** Violet-lavender bloom high above foliage; single.
- LAMARTINE.** Early blue flower. Very heavy bloomer, single.
- MME. ABEL CHATENAY.** Milk-white flower. Very fragrant, heavy bloom, double.
- MME. FLORENT STEPMAN.** Best clear white. Bloom well above foliage, single.
- MARECHAL LANNES.** Very large lavender. Spectacular, double.
- MISS ELLEN WILLMOTT.** Late white. Heavy bloomer, double.
- PRESIDENT CARNOT.** Rose-lavender. Very large flowers, double.
- PRESIDENT GREVY.** Soft blue heavy blossom, double.
- PRESIDENT THEODORE ROOSEVELT.** Wine-red, late-blooming, single.
- THOMAS JEFFERSON.** Best true violet; mid-season bloomer; single.
- THUNBERG.** Fragrant red-blue; very late-blooming; double.

Prices on French Hybrid Lilacs\*  
(Bundles of 10 only)

	Each
12 to 18 ins.....	<b>\$0.35</b>
18 to 24 ins.....	<b>.40</b>
2 to 3 ft.....	<b>.45</b>

\* All Lilacs are sold subject to grade count.

We have been growing these selected strains of Crabs and Lilacs for many years and have, by a process of elimination, reduced our list to the practical assortment above. These Crabs are entirely free from the cedar rust and are all twice-transplanted, field-grown stock. The Lilacs are grafted on privet, transplanted twice and grown two years in field rows.

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